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PREPARATION AND ADMINISTRATION OF ARSPHENAMINE AND NEOARSPHENAMINE.

STANDARD INSTRUCTIONS FOR THE PREPARATION AND INTRAVENOUS ADMINISTRATION OF ARSPHENAMINE AND NEOARSPHENAMINE FOR USE BY THE MEDICAL DEPARTMENTS OF THE ARMY, OF THE NAVY, AND OF THE VETERANS' BUREAU, AND BY THE PUBLIC HEALTH SERVICE.

[Issued July 1, 1922, superseding all previous instructions.]

Reasons for Issuing Instructions.

Reactions following the use of arsphenamine and neoarsphenamine are still occurring in the Government services, although experience has shown that these reactions can be reduced to a minimum by the use of proper methods of procedure. Practically all serious reactions which have occurred in the Government services during the last five years have been specially investigated, and in nearly every instance it has been shown that the reactions were due (1) to some error in the technique of the preparation and administration of the drug or (2) to faulty examination of the patient, especially in relation to the effects of previous injections. In no case has it been possible to prove that the reactions have been due primarily to inherent toxicity of the drug itself. It therefore seems desirable to issue a complete set of instructions on technique.

Instructions are issued by each manufacturer, and they vary in some details with each product. In general, these instructions are satisfactory for the particular brand concerned; but as the same standard of relative nontoxicity is required by the Government for all brands, it is not considered desirable in these instructions to individualize the products.

The following instructions may seem unnecessarily explicit, and the technique outlined may differ from others which give satisfactory results. However, every essential statement contained herein is based on the results of the study mentioned above. The procedures given are designed to make the treatment safe and at the same time not to make the technique unnecessarily exacting or cumbersome for the clinician.

Medical officers are directed to follow these instructions and are cautioned that they will be held responsible for the untoward results following the use of procedures which are essentially different.

Any of the specified apparatus which is not on hand will be furnished upon request through regular channels.

Choice of Drug.

Although neoarsphenamine is more popular than arsphenamine, on account of ease of preparation and administration, which constitutes a real advantage under some circumstances, attention is called to the fact that neoarsphenamine is a much less constant and less reliable preparation than arsphenamine.

Not only do certain batches of all brands of neoarsphenamine show a tendency to deteriorate with age but there is also a pronounced irregularity in the therapeutic activity of different batches of neoarsphenamine, regardless of the age and source of the preparations. As a result of these variations, the physician may obtain a much less satisfactory therapeutic result than when arsphenamine is used. Arsphenamine, regardless of age, brand, or lot number, shows a more uniform therapeutic activity. It is probably, also, inherently more potent. Arsphenamine should, therefore, be used whenever practicable, and neoarsphenamine should be reserved for situations in which it is difficult to give arsphenamine.

Other members of the arsphenamine series are considered to be still in the experimental stage and not for routine use.

In regard to different brands, any product which has passed the requirements of the United States Public Health Service may be used. The labels of duly licensed products bear imprint to this effect and the license number.

Arsphenamine.

I. LICENSED PRODUCTS.

The following firms have been licensed by the Treasury Department to manufacture or to import arsphenamine:

A. LICENSED TO MANUFACTURE.

Name of firm and address.	Name of trade product.
Dermatological Research Institute, 1720 Lombard Street, Philadelphia, Pa.	Arsenobenzol.
Diarsenol Company (Inc.), Buffalo, N. Y.	Diarsenol.
Mallinckrodt Chemical Works, St. Louis, Mo.	Arsphenamine.
H. A. Metz Laboratories (Inc.), 122 Hudson Street.	Salvarsan.
Powers-Weightman-Rosengarten Co., Philadelphia, Pa.	Arsenobenzol Billon.
E. R. Squibb & Sons, New Brunswick, N. J.	Arsphenamine.

B. LICENSED TO IMPORT.

Name of firm and address.	Name of trade product.
Farbwerke, vorm. Meister Lucius und Brüning, Hoechst-am-Main, Germany.....	Salvarsan.
Poulenc Frères, 92 Rue Vieille-du-Temple, Paris, III, France.	Arsenobenzol Billon.

II. METHOD OF INJECTION.

Only the gravity method should be employed in administering arsphenamine.

III. MATERIALS REQUIRED.

- A. Erlenmeyer flasks, 500 to 1,000 c. c. capacity.
- B. Funnels, glass, 4-inch.
- C. Cylinders, graduated, 500 to 1,000 c. c. capacity.
- D. Gravity apparatus, consisting of—
 - 1. Gravity graduated glass cylinders, 300 c. c. capacity; long graduations at the 100 c. c. marks; medium long graduations every 25 c. c.; short graduations for each 5 c. c.; the zero point to be at the top and the 300 mark to be at the bottom of the cylinder.
 - 2. Rubber tubing, pure gum, heavy wall, inside diameter, 5/32-inch (about 4 mm.), of lengths to limit height of the cylinder to 3 feet above the patient's arm.
 - Caution: Before being used the first time the tubing should be filled with normal sodium hydroxide solution for not less than six hours. It should then be thoroughly rinsed in water, sterilized by boiling, and then thoroughly rinsed with sterile water again just before using.
 - 3. Needles with slip joint, 19 standard gauge, medium bevel, length of cannula 1½ inches. While not necessary, the Fordyce type of needle is a great convenience. The correct gauge is highly important, as it influences the rate of flow. Proper care of the needles is important. They should be cleansed immediately after use, and precautions taken to prevent rust. Just before sterilization, the point should be freshened on a stone, if necessary. A dull needle tends to make a dissatisfied patient.
 - 4. Glass tubing, 6 mm. in diameter, for windows, which should be inserted in the rubber tubing so as to be a few inches from the lower end.
 - 5. Adapters for attaching needles to end of tubing. These may be of metal or glass. If of glass they will serve as extra windows as well as adapters.
 - 6. Pinch cocks (Mohr's) for cutting off the flow, to be applied a short distance above the needle.
 - E. Sterile gauze, cut in small squares, for filtering the solution.

F. Sterile freshly distilled water. This water should be distilled in glass or block tin and should be sterilized immediately by autoclaving or boiling in Erlenmeyer flasks. These flasks should be stoppered with a gauze-wrapped cotton plug and capped with paper or tin foil. Preparation of the water preferably should be carried out on the day before use, so that it will be both fresh and cool at the time needed.

G. Sterile salt solution. This should be made with water prepared as above and chemically pure sodium chloride. Sterilization should be carried out as given above. The strength of the salt solution should be the usual 0.85 per cent. The use of salt solution in the place of distilled water for the dilution is considered a refinement which is not necessary in routine work, but it may have some advantages, since a solution of arsphenamine in distilled water is not isotonic.

H. Normal sodium hydroxide volumetric solution, U. S. P. IX, p. 573. Enough of this can be prepared at one time to last for a month or longer, provided it is kept in a rubber stoppered wax- or paraffin-lined bottle. There is danger of deterioration on account of absorption of CO₂ from the air and of reactions with the glass container. A wax-lined bottle can be prepared by placing wax or paraffin in a bottle, sterilizing with dry heat, and spreading the melted wax by rotation over the inside of the bottle as it is cooling. If precipitate is found in the alkali, it is probably an evidence of deterioration of the solution, which should be discarded. For use in large clinics, a 2-liter bottle, protected from the action of the alkali and of the atmospheric CO₂, and set up with an automatic measuring burette, is a great convenience and will insure the safe-keeping of the alkali for a long period.

I. Burette or pipette. A graduated burette or pipette for accurately measuring the alkali.

All the glassware mentioned above should be of chemical standard. All apparatus should be surgically clean, freshly sterilized, and cool at time of using. The apparatus should be sterilized by dry heat or autoclave, with the exception of the tubing and the needles, which should be boiled.

If the medical officer has any doubt about being able to obtain pure normal sodium hydroxide solution, the same will be supplied on request to the Army Medical School, the Naval Medical School, or to the Hygienic Laboratory, Washington, D. C.

IV. INSPECTION OF DRUG.

A. Note and record manufacturer, lot number, and particularly the dosage stated on the label. In this connection it is a great convenience, and more economical, to employ dosages which are just sufficient to make up the unit batch of solution desired; e. g., if 10

doses of 0.4 gram are made up at a time, use ampules containing 4 grams. An ampule containing 10 doses is the largest that should be used.

B. Examine ampules critically and do not use any which are cracked or in which the powder is not freely mobile and is not of a pale yellow to a lemon-yellow in color. Forward any suspected ampules with explanatory letter directly to the Hygienic Laboratory, Washington, D. C., for examination.

C. The ampules, having satisfactorily passed preliminary inspection, should be immersed in 95 per cent alcohol, primarily to detect any minute cracks in the glass not visible on preliminary inspection and also to cleanse the ampule. Lay ampules on sterile towel to dry or wipe off alcohol with sterile gauze.

V. PREPARATION OF SOLUTIONS.

A. The amount to be prepared at one time will depend on the number of patients, but unit batches of more than 10 average doses should not be prepared.

B. Place in Erlenmeyer flasks about 10 c. c. of freshly distilled sterile water for each decigram of arsphenamine to be used; e. g., 100 c. c. for 1 gram. Open ampule and sprinkle—do not dump—contents on surface of water. The temperature of the water is of great importance. For all brands of arsphenamine, except for arsenobenzol manufactured by the Dermatological Research Institute, the water should be at room temperature and, as a rule, the drug should go into solution, with little or no agitation, within a few minutes. A slight amount of shaking is permissible with any product, but shaking should always be kept at a minimum.

Exception: The arsphenamine manufactured by the Dermatological Research Institute requires either hot water alone, or it can be dissolved in cold water if the powder is first thoroughly moistened with ethyl alcohol (about 1 c. c. to 0.6 gram). This amount of alcohol is harmless. In either case it is essential, immediately after contact with the water, to shake the powder vigorously for a few seconds in order to prevent the formation of gummy masses. After this shaking it should stand until completely dissolved and until the solution is cool.

When the arsphenamine has completely dissolved, forming a perfectly clear solution with an absence of any gelatinous particles when viewed by transmitted light, it is ready for alkalinization. If for any reason the arsphenamine fails to form a perfect solution, it must be discarded.

C. Correct alkalinization is extremely important; failure to alkalinize properly causes more reactions than any other error connected with the use of arsphenamine.

1. The exact method consists in the addition all at once of 0.85 c. c. normal sodium hydroxide solution for each 0.1 gm. of arsphenamine used; e. g., 8.5 c. c. for 1 gm. of drug. This is the correct amount necessary to form the disodium salt of arsphenamine (see V, p. 1873), the form which is best tolerated by the patient.

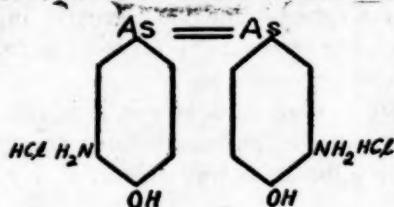
2. Approximate method of alkalinization. An exception to the rule that only standardized normal alkali should be used may be made in case this is not obtainable. Under such circumstances, the exact concentration of alkali being unknown, the operator should keep in mind the following facts: Arsphenamine as it appears on the market is the dihydrochloride of the arsphenamine base (see I, p. 1873), which is soluble in water; but the solution is strongly acid and highly toxic. Upon the gradual addition of sodium hydroxide a precipitate at once begins to form and then redissolves. This property of the drug, not understood by some physicians, has caused them to mistake the end point. This mistake is especially likely to occur when the operator thinks he is using a 15 per cent solution, when in reality the solution is only 4 or 5 per cent. The drug when injected in this still strongly acid state, the monohydrochloride (see II, p. 1873), produces serious reactions.

When a little over one-fourth of the amount of alkali indicated under (1) has been added, the precipitate no longer redissolves. From this point on, until there has been added almost three-fourths of the amount of alkali necessary to form the disodium salt, the precipitate remains and does not redissolve on shaking (see III, p. 1873). But when three-fourths of the total amount necessary has been added, the precipitate redissolves (see IV, p. 1873).

It is at this point, when just enough alkali has been added to dissolve the precipitate, that the solution has very frequently been injected. *This solution of the monosodium salt is the most frequent cause of reactions.* At this point 75 per cent of the correct amount of sodium hydroxide solution has been added, and hence an additional one-third of the total amount of alkali used up to this point should now be added (see V, p. 1873). This last addition is the remaining 25 per cent of the correct amount corresponding to a total of 0.85 c. c. per 0.1 gm. of standardized $\frac{N}{1}$ NaOH solution as mentioned under (1) above; e. g., if 3.3 c. c. of an unknown solution were required for completely clearing a

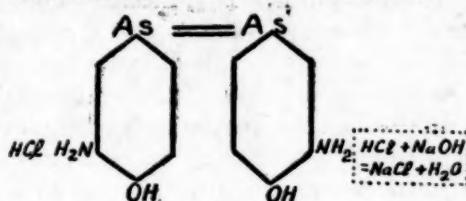
The Chemical Transformation of Arsphenamine into its Disodium Salt for Intravenous Administration by the Addition of Sodium Hydroxide.

I. ARSPHENAMINE DIHYDROCHLORIDE



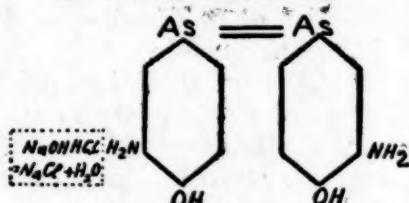
I. Arsphenamine (dihydrochloride). This is the drug as it appears on the market. It is soluble in distilled water, strongly acid to litmus, highly toxic, and must not be injected.

II. ARSPHENAMINE MONOHYDROCHLORIDE



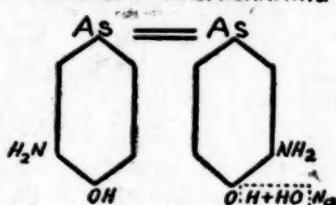
II. Arsphenamine monohydrochloride is formed when one-fourth the amount of sodium hydroxide necessary to form the disodium salt has been added, or 0.85 c. c. of normal sodium hydroxide per 0.4 gram of arsphenamine. It remains in solution, is still strongly acid to litmus, is highly toxic, and must not be injected.

III. ARSPHENAMINE BASE



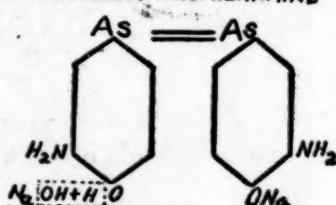
III. The base is formed when one-half the amount of sodium hydroxide necessary to form the disodium salt has been added, or 1.70 c. c. of normal sodium hydroxide for 0.4 gram of arsphenamine. A heavy insoluble precipitate is formed. This suspension must not be injected.

IV. MONOSODIUM ARSPHENAMINE



IV. The monosodium salt of arsphenamine is formed when three-fourths the amount of sodium hydroxide necessary to form the disodium salt has been added, or 2.55 c. c. of normal sodium hydroxide per 0.4 gram of arsphenamine. It is just soluble in water, and forms an unstable, slightly alkaline solution, which must not be injected.

V. DISODIUM ARSPHENAMINE



V. The disodium salt of arsphenamine is formed when the final fourth of the full amount of normal sodium hydroxide necessary has been added, or 3.4 c. c. of normal sodium hydroxide for 0.4 gram of arsphenamine. This amount is one-third more than the amount used for the monosodium salt IV. This form is a stable alkaline solution. It is the only form in which the drug should be injected.

solution containing 2 gms. of arsphenamine, 1.1 c. c. more should be added. With a thorough understanding of the above, the operator may roughly standardize his alkali against the arsphenamine. No two brands of arsphenamine vary greatly in the amount of alkali required, whereas various alkali solutions vary in strength by several hundred per cent.

The P_h of a proper solution is about 10, and it is impossible to buffer it to neutrality by common buffers without precipitation. Moreover, the alkaline solution is well tolerated if given slowly and well diluted.

3. "*Haphazard method*" of alkalinization, or *drop method*. This is mentioned only to condemn it. It is inconceivable that the operator will be unable to secure some sort of a graduated measuring device in order to measure the alkali instead of guessing at the amount. Numerous reactions from underalkalinization have occurred with this method, particularly where several doses of the drug are prepared at one time. The alkali has been added with a dropper until clearing occurred, and then a few additional drops have been added regardless of whether the solution contained 1 or 10 doses. Less frequently overalkalinization has also occurred. The injection of an overalkalinized solution causes pain along the vein, and thrombosis.

D. *Filtration and dilution to proper strength* of the alkalinized solution.—With sterile forceps place 4 layers of sterile gauze in the funnel. Wash with sterile water. Pour alkalinized solution of arsphenamine through this gauze into a graduated cylinder and then rinse the filter with enough sterile distilled water to bring the total for each decigram of drug up to 25 c. c.; e. g., for 1 gram of arsphenamine 250 c. c. of solution should be made. This washing of the drug through the filter with the water insures full dosage. If a saline solution is desired, it is used at this point in place of the distilled water, at usual strength, 0.85 per cent.

E. *Time the solution should be allowed to stand*.—The properly alkalinized, filtered, and diluted solution should now stand for at least 30 minutes before being injected, to allow completion of the chemical reactions. The toxicity is considerably reduced by this delay. The solution may stand as long as three hours without undergoing any increase in toxicity, provided it is protected from the air, not shaken, and provided the temperature does not exceed 30° C. The solution is now ready for administration.

F. *Temperature*.—Thirty degrees C. is the correct temperature at which the drug should be introduced; in no case should it be warmed above this point.

G. *Dosage*.—As a rule the initial dose should be small. The average dose used is about 0.4 gram for 150 pounds body weight, but no

hard and fast rule can be laid down; each case should be considered individually by the clinician. When a radical cure is being sought and the patient tolerates the injections well, full doses should be given.

VI. ADMINISTRATION.

A. Emphasis should be laid on the complete physical examination preliminary to administering arsenical treatment, for evidence of renal, cardiovascular, or visceral changes, in the presence of which it should be used cautiously. Weekly urinalyses should be made during treatment. The patient should be questioned concerning any reactions following the last treatment, with special reference to any toxic skin eruptions as danger signals against further treatment. Any evidence of an exfoliative dermatitis is an *absolute contraindication* against any further treatment with any arsenical. Evidence of jaundice should also be looked for and, if present, is an indication for caution. In late cases the possibility of a Herxheimer reaction following a large injection should be remembered. This may be fatal should vital structures be involved. *Each patient should receive individual consideration.*

B. *Preparation of patient.*—The patient should be given a mild cathartic the night before and should eat no food within two or three hours before the injection. Only a light meal should be taken a few hours following the injection. Ambulatory patients should rest for a short time after the injection. If large doses are being given, the patient preferably should be kept in bed until the following morning.

C. The patient should be placed in a recumbent position.

D. The gravity apparatus should be arranged to provide a column of solution not over 3 feet in height. The tubing should be rinsed with sterile water; then the cylinder and tubing should be filled with the solution and the air expelled by lowering the end of the tube below the level of the fluid in the cylinder. Apply pinch cock.

E. Select a suitable vein in either arm and sterilize the overlying skin by applying tincture of iodine, which should preferably be removed after a minute or two with 95 per cent alcohol.

F. Apply rubber turniquet.

G. Insert needle, bevel up, in two stages (first through the skin, second into the vein), and allow a few drops of blood to escape to indicate entrance to the vein. The needle should be slid well into the vein in order to avoid escape of the point from the vein on further slight manipulations. Now connect adapter attached to gravity apparatus. Open pinch cock and snap it over the window.

H. *Rate of injection.*—If the specifications as to the gauge of needle, etc., have been followed, the correct rate of injection is practically

insured, i. e., by the size of the needle and the length of the tube; however, this should not be taken for granted, but the exact time should be observed, and in no case should the rate exceed 25 c. c. in one minute or 0.4 gram dose in four minutes; five minutes is preferable. A graduated sand glass which runs for five minutes is a convenient timer. The rate of flow should be even as well as slow. Should patient show any signs of reaction, stop. It is highly desirable, in sensitive patients, to wait a minute or two after injection of first 0.1 gram before proceeding with rest of injection. When the necessary amount has been injected, cut off flow with pinch cock, disconnect tubing, allow a few drops of blood to escape, and then withdraw needle and place sterile gauze over the puncture, instructing the patient to hold it there for a few minutes. If another injection is to be given and there is any suspicion of contamination of the tubing with blood, empty cylinder and start over with a new sterile tube.

VII. REACTIONS.

Following the above methods, reactions should be rare. If a serious reaction does occur, a complete account should be forwarded to the Surgeon General, including clinical history, dose injected, lot number, and manufacturer of the drug. Samples should also be sent of the same lot of drug; also samples of the sodium hydroxide, distilled water, and saline used for purposes of investigation.

The prevention and treatment of reactions is very important. A discussion of this subject is not undertaken here, except to call attention to general hygiene, diet, foci of infection, dosage, etc., as well as care in preparation and administration of the drug in prophylaxis of these reactions. Patients that continually show immediate reactions should receive prior administration of atropine or divided doses of arsphenamine or combinations of both. In the clinical control of the immediate or nitritoid types of reactions, the chief preparation of value is epinephrin $\frac{1}{1000}$, about 1 c.c. intramuscularly. This is also of value in the very severe type of reaction—hemorrhagic encephalitis. In the severe types of skin reactions, as exfoliative dermatitis, rapid alkalinization of the patient is indicated. In all these delayed types of arsenical poisoning excellent results are said to be derived from the use of sodium thiosulphite given by mouth or intravenously.

Neoarsphenamine.**I. LICENSED PRODUCTS.**

The following firms have been licensed by the Treasury Department to manufacture or import neoarsphenamine:

A. LICENSED TO MANUFACTURE.

Name of firm and address.	Trade name of product.
Dermatological Research Institute, 1720 Lombard Street, Philadelphia, Pa.	Neoarsphenamine.
Diarsenol Co. (Inc.), Buffalo, N. Y.	Neodiarsenol.
H. A. Metz Laboratories (Inc.), 122 Hudson Street, New York City.	Neosalvarsan.
Powers-Weightman-Rosengarten Co., Philadelphia, Pa.	Novarsenobenzol Billon.
E. R. Squibb & Sons, New Brunswick, N. J.	Neoarsphenamine

B. LICENSED TO IMPORT.

Farbwerke, vorm. Meister Lucius und Brüning, Hoechst-am-Main, Germany	Neosalvarsan.
Poulenc Frères, 92 Rue Vieille-du-Temple, Paris, III, France	Novarsenobenzol.

II. METHOD OF INJECTION.

The use of the gravity method is strongly recommended, especially in clinics where a considerable number of doses are to be given. It was demonstrated in one clinic that the average time required to give 100 injections was reduced, without changing the personnel, when the gravity method was substituted for the syringe method, and a high percentage of reactions, due directly or indirectly to the syringe method, also ceased to occur. With the gravity apparatus arranged to deliver a dose in about four minutes, one operator was able to run two tables much more easily than one table with the syringe method.

It is recognized, however, that there are circumstances in which the syringe method is indicated, as in the field, where apparatus must be reduced to a minimum. Under these circumstances the use of neoarsphenamine by the syringe method is a valuable therapeutic measure. It fills a need, but technically is inferior to the gravity method; and, therapeutically, neoarsphenamine given by either method is inferior to arsphenamine given by the gravity method.

III. APPARATUS REQUIRED.**A. When the gravity method is to be used:**

1. Gravity apparatus (see Arsphenamine, III-D).
2. Erlenmeyer flasks, 50-300 c.c.
3. Funnels, glass, 2-inch.
4. Sterile gauze.

5. Graduated glass cylinders, 100 to 500 c. c.
6. Sterile distilled water (see Arsphenamine, III-F).
7. Saline, 0.85 per cent (see Arsphenamine, III-G).

B. When syringe method is to be used:

As above, except in place of gravity apparatus.

1. 10 to 50 c. c. all-glass syringes.
2. Rubber tubing, short, with adapters connecting syringe and needle.
3. Needles, 25 standard gauge, medium bevel.

IV. INSPECTION OF DRUG.

An even more critical examination should be made than in case of arsphenamine, as neoarsphenamine occasionally decomposes in the ampule, even when no cracks are present. The powder should be freely mobile and lemon-yellow to canary-yellow in color. When it approaches a red color, is distinctly lumpy or solidified, do not use, but forward samples to the Hygienic Laboratory for examination.

Immerse in alcohol the ampules which have passed inspection, to further eliminate the presence of cracks and to clean the ampule.

V. PREPARATION OF SOLUTION.

A. *Amount to be prepared at one time.*—In marked contrast to the practice with arsphenamine, do not prepare any more solution at one time than can be administered within 20 minutes.

B. *Concentration.*—Preferably, 1 decigram should be dissolved in 12.5 c. c. of water. This solution is then twice as concentrated as an arsphenamine solution. Concentrations as high as 1 decigram in 0.5 c. c. of water can be used in the field, or under other special circumstances. The highly concentrated solutions, however, should be given very slowly.

C. *Solution:*

1. Put in Erlenmeyer flask 12.5 c. c. sterile distilled water for each decigram of neoarsphenamine. In the field the concentrated solution can be made in the ampule itself by using water supplied in another ampule. (*Caution:* The distilled water used must be at room temperature and not to exceed 30° C.)

2. Open ampule and sprinkle—do not dump—powder into the water and, by preference, allow it to go into solution with no agitation whatever. Slight rotation of the flask is permissible. *Shaking the solution increases its toxicity and should be avoided.*

IN CASE THE SOLUTION IS NOT PERFECTLY CLEAR AND TRANSPARENT, IT SHOULD UNDER NO CIRCUMSTANCES BE USED. WHETHER IT REQUIRES ONE MINUTE OR TEN MINUTES FOR THE DRUG TO FORM A PERFECT SOLUTION IS UNIMPORTANT, BUT IT

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SHOULD NOT REQUIRE MORE THAN TEN MINUTES. THE IMPORTANT POINT IS, NOT THE RATE OF SOLUBILITY BUT THE COMPLETE SOLUBILITY OF THE DRUG.

3. As soon as the neoarsphenamine is in solution, *filter* through washed gauze into tall, narrow cylinders and keep stoppered. It is preferable to use a size of cylinder which the solution will nearly fill. The smaller the air column over the solution the less the danger of increased toxicity. The solution is now ready to inject, and, in marked contrast to the arsphenamine solution, which should stand at least 30 minutes before its injection, the neoarsphenamine solution should be injected *immediately*, and in no case shall it be allowed to stand longer than 20 minutes.

4. *Dosage*.—The initial dose, as a rule, should be small. The average dose is about 0.6 gram for 150 pounds body weight; but no attempts to lay down a hard and fast rule in this regard are made. The patient must be individualized.

VI. ADMINISTRATION.

The directions made under arsphenamine (p. 1875, VI) to apply the administration of neoarsphenamine, with the exception of the dosage, rate, and method of administration.

Rate.—If instructions have been followed, the proper rate is practically insured by the character of the apparatus, but it must be checked by using a time-piece, and in no case, *whether the gravity or the syringe method is used, should more than 0.1 gram of neoarsphenamine be injected in 30 seconds, or 0.6 gram in 3 minutes*. This time is one-half that required for arsphenamine. In giving concentrated solutions, especial care is necessary in order to carry out this rule.

VII. REACTIONS.

See instructions under Arsphenamine, VII.

CONDENSED STANDARD INSTRUCTIONS FOR THE PREPARATION AND INTRAVENOUS ADMINISTRATION OF ARSPHENAMINE AND NEOARSPHENAMINE FOR THE MEDICAL DEPARTMENTS OF THE ARMY, OF THE NAVY, AND OF THE VETERANS' BUREAU, AND BY THE PUBLIC HEALTH SERVICE.

ARSPHENAMINE.

Reactions are usually due to errors in technique or failure to adapt treatment to needs of patient. Arsphenamine is preferable to neoarsphenamine.

- I. Use any properly licensed product.
- II. Use only the gravity method.

III. Materials needed.—Erlenmeyer flasks, glass funnels, graduated cylinders, sterile gauze, sterilized freshly distilled water, normal sodium hydroxide solution, graduated pipette or burette, and gravity apparatus, consisting of 300 c. c. gravity cylinder, pure gum rubber tubing about 40 inches length, diameter $\frac{5}{32}$ inch., end adapter, glass window, slip needles, 19 standard gauge, 1½-inch cannula, medium bevel, and pinch cocks.

IV. Inspection of drug.—Record name and lot number; note especially dosage, color, and mobility of powder. If ampules are cracked, or if powder is other than pale yellow to lemon color and not freely mobile, *do not use*.

V. Preparation of solution.—Prepare not more than enough for 10 patients at one time.

A. Immerse ampules in alcohol.

B. Place in Erlenmeyer flask about 10 c. c. distilled water at room temperature for each 0.1 gram of the drug to be used, open ampule and sprinkle powder—do not dump—on surface of water; allow to go into solution with little or no agitations.

Exception.—Arsenobenzol (D. R. I.) requires for rapid solution either the use of hot water alone or cold water after having been previously moistened with ethyl alcohol (1 c. c. to 0.6 gm.). In either case immediate, vigorous shaking for a few seconds is essential to prevent the formation of gummy masses. After shaking, wait for complete solution and cooling.

C. *Alkalization.*—When solution is complete, add 0.85 normal alkali (U. S. P.) for each 0.1 gram of drug (e. g., 1 gm. requires 8.5 c. c.). When standardized normal sodium hydroxide is not available, see detailed instructions for procedure. *The drop method of measuring the alkali should never be used.*

D. *Filtration.*—Filter the clear, alkalinized, amber colored solution through sterile gauze, four-ply, previously washed out with distilled water, into a graduated cylinder (not the gravity cylinder).

E. *Dilution.*—Dilute with distilled water so that 0.1 gram arsphenamine is contained in 25 c. c. (e. g., 100 c. c. contains 0.4 gram.)

F. *Time of standing.*—The filtered, perfectly clear, alkalinized and properly diluted solution should now *stand for 30 minutes* before being injected.

G. *Dosage.*—The initial dose should be small. The average dose is about 0.4 gm., but in this respect each case should receive individual consideration. For radical cure, full doses are indicated.

VI. Administration:

A. *Preparation of patient.*—In each instance attention should be given to the physical condition, effects of previous treatments of arsphenamine, etc.

B. The use of gravity apparatus, with level of fluid 3 feet above the vein, and 19 gauge needle should give proper rate of injection. However, it should be checked by a timepiece and not more than 25 c. c. (0.1 gm. of drug) should be injected per minute. It is advisable to take about 5 minutes for injection of the average dose (0.4 gm.).

VII. Reactions.—See detailed instructions.**NEOARSPHENAMINE.**

I. Use any properly licensed product.

II. The gravity method of injection is strongly recommended, in view of the fact that reactions have occurred much less frequently in large clinics using this method as compared with large clinics using the syringe method. The syringe method, however, is a valuable one especially in the field. If the syringe is used, it should be with a 25-gauge needle connected to the syringe with a short piece of rubber tubing.

III. *Materials needed.*—Gravity apparatus, as for arsphenamine, or 10 to 50 c. c. all-glass syringes, with 25-gage needles and short rubber connections. Erlenmeyer flasks, funnels, sterile gauze, cylinders, and sterile freshly distilled water.

IV. *Inspection of drug* is even more important than in case of arsphenamine, as neoarsphenamine may, under certain conditions, change in the ampule. Note manufacturer, amount contained, and especially color, mobility, and bulk of the powder. If ampules are cracked, or if powder is other than canary yellow and not freely mobile, *do not use*.

V. Preparation of solution:

A. Immerse ampules in alcohol.

B. Place in an Erlenmeyer flask, 12.5 c. c. of distilled water for each 0.1 gram of the drug to be used, and sprinkle—do not dump—powder on the surface of the water. Allow it to go into solution without shaking. Slight agitation by rotating the flask is permissible. *Shaking increases toxicity.* While in the field and under special circumstances a concentration as high as 0.1 gram in 0.5 c. c. of water can be used, the use of 12.5 c. c. to each 0.1 gram is strongly recommended. *Discard any product which is incompletely soluble.*

C. *Filtration.*—Filter the perfectly clear solution through washed sterile gauze into a narrow graduated cylinder.

D. *Time of standing.*—Neoarsphenamine solutions, in marked contrast to arsphenamine solutions, should not stand but should

be given at once, and *in no case should they be allowed to stand for more than 20 minutes. If any haziness or clouding occurs, do not use.*

E. *Dosage.*—The initial dose should be small. The average dose is 0.6 gm., but in this respect each patient should receive individual consideration.

VI. *Administration.*—Pay particular attention to preparation of patient and to rate of injection, which must not exceed the introduction of more than 0.1 gm. of neoarsphenamine in 30 seconds, whether the gravity or the syringe method be employed. The rate may be almost perfectly controlled by the use of the gravity apparatus specified. With the syringe method the use of the small sized needle specified and the short rubber tube connector will enable one to inject sufficiently slowly without great difficulty, although greater care is necessary than with the gravity method. The rate should be frequently checked with a timepiece.

VII. *Reactions.*—See detailed instructions.

THE COLLEGE STUDENT AND VENEREAL DISEASES.

WHAT COLLEGE PRESIDENTS SAY.

Is venereal infection decreasing among college students? Rather definite answers to this query came as an interesting sidelight in response to a recent effort on the part of the United States Bureau of Education and the United States Public Health Service to obtain from college presidents their opinions with respect to the prevailing attitudes and practices of college men in sexual matters. Nearly one hundred college and university executives were asked the following questions:

In your experience does it seem that the student's attitude toward sexual promiscuity, or his habits and practices have undergone any considerable change during the past 15 years? If so, what is the direction of the change and to what forces do you attribute it?¹

In all, 65 replies were received, embracing comments on a variety of matters, such as the apparent growing familiarity between the sexes, the effect of the war and contact with European standards upon sex conduct, the prevailing fashions in dress, the modern dance forms, the conversational habits of students, and the prevalence of venereal diseases and the attitude of college men toward them. These various problems of conduct, directly or remotely related to sex, are discussed, as might be expected, from many points of view. What one college president sees as a sign of relaxed moral standards another views simply as a symptom of an effort to place sex relation-

¹ The questions, it will be noted, make no reference to venereal diseases.

ships on an intelligent and enlightened basis. The effect of the war comes in for a good deal of discussion, with some diversity of opinion as to its ultimate effect upon sex standards. On one topic alone is there unanimity of opinion—that of venereal diseases. The fact that practically 40 per cent of the replies specifically mention venereal diseases signifies the importance attached to them by college presidents as a problem of conduct.

The college student of to-day realizes more fully than his brother of an earlier day the dangers and severe risks to health involved in promiscuous sex relations, and as a consequence is much more circumspect in his conduct and has, on the whole, a more enlightened attitude toward all sex matters. Such, at least, is the consensus of opinion among college presidents. That this change in attitude and practice is not due altogether to a higher "sense of morality" is frankly conceded by a number of presidents, and there are a few who seem to regret that "hygiene" rather than "morals" has been the dominant motive in the change that appears to have taken place in the past 15 or 20 years.

In explaining the forces responsible for this change the presidents specify a number of factors which they consider as paramount in influencing the sex life of the young man in college. The effective forces, loosely classified, are, first, education, both popular and academic, in matters of health, with an increasing emphasis on the hygiene of sex and venereal diseases; second, a more active concern on the part of the college in the physical well being of its students, including increased opportunities for physical training and play activity; third, improvement in environmental factors, such as the elimination of the saloon and the suppression of prostitution; and, fourth, the influence of coeducation upon the "atmosphere" of the college.

A number of presidents confess that they are more or less at a loss to specify the facts upon which their judgment is based. A few of them compare conditions to-day with conditions in their own student days and find the comparison favorable to the present. The most encouraging criterion, however, and the one chiefly relied upon in support of the belief that college students to-day are living a cleaner and healthier sex life than heretofore, is the evident decline of venereal infection among this particular group.

"A physician in this town who has much to do with the college students assured me that there was far less venereal disease to-day than 25 years ago," comments one president. He attributes some of this improvement to "instruction in these matters given in our schools and colleges." The hygiene department of a large eastern college, at the request of its president, reports: "In our examination

of 3,500 or 4,000 boys each half year, we do not see more than three or four cases of acute venereal disease a year." A president of a southern university, in expressing the opinion that there has been considerable improvement in the average student's attitude toward sexual promiscuity, states: "One fact on which I count heavily is that the college physician steadily reports to me that cases of venereal diseases in the student body have become extremely rare, and he is in a position to speak with some definiteness on the subject." Another president (Middle West) notes that the "movement is in the right direction," attributing this tendency to various educational measures in the interest of sex hygiene, and concludes: "Although the number of students is constantly increasing, this particular form of student vice has shown a constant decrease. This I have not only from my own observation, but from the reports of the physicians and hospitals in the city." A New England college, through its president, reports that from all the evidence available, "the behavior of young men has steadily improved during the past 15 or 20 years," basing his judgment on "the information given me by the young men who have graduated during the 13 years of my incumbency * * * and from the advice received from our college physicians." In another letter there is reference to the fact that among the S. A. T. C. students examined during the war "very few were infected with venereal diseases." "In this college at least," writes another New England college executive, "there has been marked improvement during the last decade or two. There is little to support my general impression except that the results of our physical examination of the men students are highly satisfactory."

An especially noteworthy statement comes from a director of hygiene and public health who has had unusual opportunities for observation in three well-known State universities. He submits: "One thing I am certain of is that there has been a marked decrease in sexual diseases among college students during recent years. This has been distinctly noticeable. At the University of _____ last year more than 7,000 students were registered, and there were not more than 20 cases at any one time." He states further that his personal observations, based on the three schools with which he has been identified, are confirmed by the findings of school physicians in at least two other large universities, one on the Pacific coast and one in the State of New York. "This improvement is due chiefly to education," continues this director. "Students are learning more and more the danger of sexual diseases and as a consequence are avoiding them."

The president of a State university in the West gives as his judgment that "there has been a great gain in all matters pertaining to

social hygiene throughout the colleges of the country during the past 15 or 20 years." This judgment is based upon 30 years' experience with students of a western State. In regard to venereal diseases this same educator says: "I am sure that you will be interested in knowing that during the war period, of the R. O. T. C. at the University of ——, out of some 400 men examined by the Army physicians, only one case of venereal disease was found." In another reply—this one from the South—the statement is made: "So far as can be ascertained, there is practically no venereal disease among our students." A physician who for a number of years was connected with the hygiene and health department of a large eastern university says: "My impression is that there has been a marked reduction in sexual promiscuity and practice during the past 15 years, and I believe this is chiefly due to the better understanding by boys and girls of the relationship and the rights of a socially just conduct between them. The specific evidence I refer to is the record of medical examination and supervision of the student body at ——, in the year 1919-20. * * * We discovered only one history of syphilis and one of gonorrhea in original examinations, and a total of 10 cases (8 gonorrhea and 2 syphilis) during the year in the entire student body. From records of previous years it was evident that this constituted a very great reduction as compared with pre-war conditions."

The president of a western agricultural college asked the officer in charge of the health service of the college to make a statement of conditions there. The statement was as follows: "During my time here I have found only two cases of venereal diseases in this college, and, as you know, we give all students medical examination. It appears to me that there must have been great improvement along this line." An emphatic opinion is expressed by the president of one of the oldest colleges in the country: "I feel absolutely certain that the conditions of the college, as far as the attitudes and practices of the undergraduates are concerned, were never so good." This president, like many others, relies chiefly upon evidence bearing on the prevalence of venereal infection, as he remarks: "This fact is borne out and largely proved, I think, by the data in regard to venereal disease, the figures concerning which are always available to us. The proportion of men in college at the present time so afflicted is an almost negligible quantity, so far as per cent goes, as against conditions in my own time in college, when there was hardly any group within the college in which there would not be found men so afflicted."

In view of this recital of opinion, may the question, "Is venereal disease decreasing among college students?" be answered in the

affirmative? More than 20 college presidents say "Yes," and not one is found expressing a contrary opinion. A few of the presidents state that venereal diseases have always been negligible among their students, but the testimony of the large majority (of those who consider the matter) is that the last few years have witnessed a substantial and, in some instances, a very marked decrease in the number of venereal cases. It would not, of course, be in keeping with scientific accuracy to contend that the opinions set forth have the potency of facts. In but few instances have conditions in college or elsewhere been statistically verified. In fact, there are available very little reliable data respecting the prevalence of venereal diseases. The largest group thus far subjected to examination was the second million drafted men. Examination at mobilization camps showed that 5.6 per cent of these men had a venereal disease at the time of examination upon arrival at camp. This percentage includes only obvious cases of syphilis, gonorrhea, and chancroid. Wassermann examinations were not given. Furthermore, this percentage does not include those who had been cured prior to the day of examination, or who may have become infected later. Assuming, however, that 5.6 per cent fairly represents the percentage of venereal diseases among unselected groups of the population at any one time, it is obvious that the rate among college students, judged tentatively by the evidence at hand, is decidedly lower.

Whether college students as a group have always been superior in this regard to the general community, the present rise in the college standard being simply a reflection of higher community standards, or whether the college group as compared with the community actually occupies a *relatively* higher position to-day than a decade or more ago, are questions which, if answered, would throw considerable light upon the effectiveness of the movement for venereal-disease control. But leaving aside the refinements which these questions suggest, there is still the hopeful sign that college students are observing more and more the principles of hygienic living. How much of this progress may rightfully be attributed to the organized warfare against venereal diseases conducted by governmental (local, State, and National) and volunteer agencies, and how much to the more subtle campaign through the health and hygiene courses within the colleges, are also matters of speculation. Health education is undoubtedly having a telling effect. College students are avoiding, more and more, the contacts which menace health and undermine virility. This, in the light of what the college presidents say, appears reasonably certain.

STATE AND INSULAR HEALTH AUTHORITIES, 1922.

DIRECTORY, WITH DATA AS TO APPROPRIATIONS AND PUBLICATIONS.

Directories of the State and insular health authorities of the United States for each year from 1912 to 1921 have been published in the Public Health Reports¹ for the information of health officers and others interested in public-health activities. These directories have been compiled from data furnished by the respective State and insular health officers and include data as to appropriations and publications.

Where an officer has been reported to be a "whole-time" health officer, that fact is indicated by an asterisk (*). For this purpose a "whole-time" officer is defined as "one who does not engage in the practice of medicine or any other business, but devotes all his time to official duties."

ALABAMA.

Board of censors of the State Medical Association, acting as a committee of public health:

Thos. E. Kilby, governor, ex officio chairman, Montgomery.

S. W. Welch, M. D., Montgomery.

W. D. Partlow, M. D., Tuscaloosa.

J. N. Baker, M. D., Montgomery.

V. P. Gaines, M. D., Selma.

S. G. Gay, M. D., Selma.

E. S. Sledge, M. D., Mobile.

A. N. Steele, M. D., Anniston.

H. S. Ward, M. D., Birmingham.

B. L. Wyman, M. D., Birmingham.

R. S. Hill, M. D., Montgomery.

Executive health officer:

*S. W. Welch, M. D., State health officer, Montgomery.

Register of vital statistics:

*H. G. Perry, M. D., Montgomery.

State laboratory:

*L. C. Havens, M. D., Montgomery.

State sanitary engineering:

*G. H. Hazlehurst, C. E., M. C. E., Montgomery.

Assistant sanitary engineers:

*C. C. Walker, B. C. E., Montgomery.

*J. C. Carter, E. M., Montgomery.

*E. B. Johnson, C. P. H., Montgomery.

*E. M. Craig, Montgomery.

*N. H. Rector, Montgomery.

*A. S. Bedell, C. E., Montgomery.

Epidemiologist:

*K. F. Maxey, asst. surg., U. S. P. H. S., Montgomery.

County organization:

*D. L. Cannon, M. D., director, Montgomery.

*D. H. Swengel, M. D., assistant director, Montgomery.

ALABAMA—Continued.

Public health nursing:

*Jessie L. Marriner, R. N., director, Montgomery.

*Elizabeth J. MacKenzie, R. N., assistant director, Montgomery.

Venerel disease control:

*W. C. Blasingame, Montgomery.

Field lecturer:

A. J. Dickinson, D. D., Birmingham.

Communicable diseases:

*W. W. Knipmeyer, M. D., acting director, Montgomery.

Inspection:

*C. A. Abele, Ch. E., director, Montgomery.

*T. B. S. Matthews, assistant director, Montgomery.

*T. A. Belser, assistant director, Montgomery.

Chief clerk:

*Fannie Kate Centerfit, Montgomery.

Appropriation for fiscal year ending September 30, 1922, \$150,000.

ALASKA.

Board of health:

Scott C. Bone, governor, Juneau.

Harry C. DeVighne, M. D., commissioner of health, Juneau

Executive health officer:

Harry C. DeVighne, M. D., commissioner of health, Juneau.

Assistant commissioners of health:

Wm. Ramsey, M. D., Council.

J. A. Sutherland, M. D., Fairbanks.

W. H. Chase, M. D., Cordova.

Appropriation for biennium ending Mar. 31, 1923, \$41,000.

¹ Reprints Nos. 83, 123, 190, 268, 344, 405, 488, 544, 605, and 708 from the Public Health Reports.

ARIZONA.

Board of health:

Thomas E. Campbell, governor, president, Phoenix.
W. J. Galbraith, attorney general, vice president, Phoenix.
A. M. Tuthill, M. D., secretary, Phoenix.

Executive health officer:

A. M. Tuthill, M. D., State superintendent of public health, Phoenix.

Executive secretary:

*Hannah C. Egelson.

Registrar of vital statistics:

A. M. Tuthill, M. D., Phoenix.

Bureau for control of venereal diseases:

A. M. Tuthill, M. D., director, Phoenix.

Child hygiene department:

*Mrs. Chas. R. Howe, director.

Tuberculosis department:

*T. C. Cuvellier, director.

Statistician:

*Ruth W. Fritschi.

Health survey nurse:

*Mrs. Gertrude F. Russell, R. N.

Appropriations for fiscal year ending June

30, 1923:

Salaries.....	\$15,000
Operating expenses.....	6,850
Traveling expenses.....	2,800
Total.....	24,650

Publication issued by health department:

Quarterly bulletin.

ARKANSAS.

Board of health:

F. O. Mahony, M. D., president, El Dorado.
C. F. Crosby, M. D., Heber Springs.
H. L. Montgomery, M. D., Gravelly.
H. R. Webster, M. D., Texarkana.
O. L. Williamson, M. D., Marianna.
Leonidas Kirby, M. D., Harrison.
S. A. Southall, M. D., Lonoke.

Executive health officer:

*C. W. Garrison, M. D., State health officer, Little Rock.

Bureau of vital statistics:

*Mrs. Mary Ellis Brown, statistician, Little Rock.

Hygienic laboratory:

*S. F. Hoge, M. D., acting director, Little Rock.

Bureau of sanitation and malaria control:

*M. Z. Bair, chief sanitary engineer, Little Rock.

Bureau of venereal disease control:

*C. W. Garrison, M. D., director, Little Rock.

Bureau of child hygiene:

*Frances Sage Bradley, M. D., director, Little Rock.

Appropriations for biennial period ending

June 30, 1923:

Executive department—salaries and miscellaneous.....	\$27,800
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Bureau of vital statistics—salaries and miscellaneous.....	31,000
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Bureau of venereal-disease control.....	25,000
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Malaria control.....	10,000
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Total.....	93,800
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For enforcement cigarette licence law.....	5,200
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CALIFORNIA.

Board of health:

George E. Ebright, M. D., president, San Francisco.

Fred F. Gundrum, M. D., vice president, Sacramento.

Walter M. Dickie, M. D., secretary, Sacramento.

A. J. Scott, Jr., M. D., Los Angeles.

Edward F. Glaser, M. D., San Francisco.

Adelaide Brown, M. D., San Francisco.

Robert A. Peers, M. D., Colfax.

Attorney for board of health:

John C. McFarland, Los Angeles.

Executive health officer:

*Walter M. Dickie, M. D., secretary and executive officer, State board of health, Sacramento.

*Mason E. Franklin, assistant to the secretary, Sacramento.

Epidemiologist:

*Frank L. Kelly, M. D., San Francisco.

District health officers:

*Allen F. Gillihan, M. D., northern division.

*Calvin Telfer, M. D., southern division.

Sanitary inspector:

*Edward T. Ross, Sacramento.

Dental hygienist:

*Charlotte Greenhood, San Francisco.

Bureau of vital statistics:

*L. E. Ross, director, Sacramento.

Bureau of registration of nurses:

*Anne C. Jamme, R. N., director, San Francisco.

Bureau of tuberculosis:

*Edith L. M. Tate-Thompson, director, Sacramento.

Bureau of food and drugs:

*Erwin J. Lea, director, Berkeley.

Bureau of communicable diseases:

*W. H. Kellogg, M. D., director, Berkeley.

Bureau of social hygiene:

*Elizabeth McManus, director, Los Angeles.

Bureau of sanitary engineering:

*Ralph Hilscher, C. E., director, Berkeley.

Bureau of child hygiene:

*Ellen S. Stadtmuller, M. D., director (temporary), San Francisco.

Appropriations for biennial period ending

June 30, 1923:

Statutory salaries.....	\$47,800
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Traveling and contingent (including printing).....	60,000
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Support of district health officers.....	27,500
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Support of food and drug laboratory.....	69,355
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Support of hygienic laboratory.....	86,900
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Sanitary inspectors.....	35,400
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Vital statistics.....	42,000
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Contagious diseases.....	40,650
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Bureau of child hygiene.....	38,500
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Bureau of social hygiene.....	51,600
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Bureau of sanitary engineering.....	68,770
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Tuberculosis—Subsidy and administration (administration, \$60,000).....	600,000
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Public health nurses.....	10,000
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Malaria control (emergency).....	20,000
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Plague and parasitology (emergency).....	5,000
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Dental hygiene.....	15,000
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Total.....	1,218,625
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CALIFORNIA—Continued.

Other sources of revenue:

Fees for registration of nurses, \$15 each.
 Renewal of registration certificate, \$1 per year.
 Licensing of cold-storage warehouses, rated according to capacity.
 Fines for violation of pure food and drugs act.
 Fees for certified copies of records.

Publications issued by health department:

Biennial report.
 Quarterly bulletin.
 Weekly news-letter.

COLORADO.

Board of health:

Wm. H. Sharpley, M. D., president, Denver.
 G. K. Olmsted, M. D., vice president, Denver.
 Tracy R. Love, M. D., secretary, Denver.
 C. W. Thompson, M. D., Pueblo.
 R. L. Drinkwater, M. D., Denver.
 G. W. Bumpus, D. O., Denver.
 Sherman Williams, M. D., Denver.
 Hugh F. Lorimer, M. D., Crowley.
 J. M. Barney, M. D., Denver.

Executive health officer:

Tracy R. Love, M. D., secretary State board of health, Denver.

Bacteriologist:

*Wm. C. Mitchell, M. D., Denver.

Medical inspector:

*J. W. Morgan, M. D., Denver.

State food and drug commissioner:

*_____, Denver.

Division of venereal diseases:

*S. R. McKelvey, M. D., director, Denver.

Appropriations for fiscal year ending Nov.

30, 1922:

Salaries.	\$21,900
Detention home fund.	1 25,000
Laboratory equipment.	1 10,000
Printing and publications.	1,250
Traveling expenses.	4,800
Samples and supplies.	600
Venereal diseases.	20,000
Incidental expenses.	1 2,000
Total.	85,550

CONNECTICUT.

Public health council:

Edward K. Root, M. D.
 S. B. Overlock, M. D.
 C. E. A. Winslow, D. P. H.
 James W. Knox.
 Robert A. Cairns, C. E.
 James A. Newlands.

Executive health officer:

*John T. Black, M. D., commissioner of health, Hartford.

Laboratory director:

C. J. Bartlett, M. D.

Sanitary engineering:

J. Frederick Jackson, C. E., director.

Preventable diseases:

*Stanley H. Osborn, M. D., director.

CONNECTICUT—Continued.

Vital statistics:

*William C. Welling, director.

Division of public health nursing:

*Margaret K. Stack, R. N., director.

Bureau of child hygiene:

*Howard A. Lanpher, M. D., director.

Division of venereal diseases:

Daniel E. Shea, M. D., director.

Appropriations for fiscal year ending June 30, 1923:

General administrative expenses.	\$15,500
Salary commissioner.	4,000
Purchase and free distribution of antitoxin.	22,500
Preventable diseases.	15,000
Vital statistics.	12,500
Sanitary engineering.	12,500
Laboratory.	25,000
Child hygiene.	18,000
Venereal disease control work.	10,000
Mental hygiene.	3,000
Total.	138,000

Federal appropriation, Shepard-Towner Act. \$19,311.48

Available for laboratory construction. 95,748.42

Other sources of revenue:

Medical practice, registration fees.

Publications issued by health department:

Monthly bulletin.

Annual vital statistics report.

Biennial report of State department of health.

DELAWARE.

Board of health:

Wm. P. Orr, M. D., president, Lewes.
 L. S. Conwell, M. D., secretary, Dover.
 J. W. Clifton, M. D., Smyrna.
 W. F. Haines, M. D., Seaford.
 Jos. P. Wales, M. D., Wilmington.
 G. W. K. Forrest, M. D., Wilmington.
 Edgar Q. Bullock, M. D., Wilmington.

Executive health officer:

L. S. Conwell, M. D., secretary State board of health, Dover.

Pathologist and bacteriologist:

*Herbert J. Watson, Newark.

Appropriations for the fiscal year ending

Jan. 7, 1923:

State board of health.	\$6,000
Laboratory.	10,000
Vital statistics.	2,000
Diphtheria antitoxin and immunizing agents.	5,000
Venereal disease control work.	2,500
Supervising nurse for midwives.	2,000
Total.	27,500

DISTRICT OF COLUMBIA.

Executive health officer:

*Wm. C. Fowler, M. D., health officer, Washington.

Assistant health officer:

*_____, M. D., Washington.

¹ Years 1921 and 1922.

DISTRICT OF COLUMBIA—Continued.

Chief clerk and deputy health officer:
*Arthur G. Cole, Washington.

Chief bureau of preventable diseases and director bacteriological laboratory:
*John T. Sprague, M. D., Washington.

Bacteriologist:
*John A. Noble, Washington.

Serologist:
*W. F. Landen, Washington.

Chemist:
*Thomas Malcolm Price, Ph. D., Washington.

Chief sanitary inspector:
*C. R. Holman, Washington.

Chief food inspector:
*Reid R. Ashworth, D. V. S., Washington.

Chief medical and sanitary inspector of schools:
*Joseph A. Murphy, M. D., Washington.

Appropriations for the fiscal year ending June 30, 1923:

Salaries.....	\$100,800
Prevention of communicable diseases.....	40,000
Disinfecting service.....	6,000
Isolation wards at hospitals.....	16,500
Milk and food inspection and regulation.....	7,200
Dispensary service, including treatment of tuberculosis and venereal disease.....	12,500
Examination, advice, and care of children under 6 years of age under contract with child-welfare society.....	18,000
Miscellaneous.....	9,450
Total.....	210,540

Publications issued by health department:
Weekly report by health department.
Annual report of health officer.
Monthly statement of average grade of milk sold.

FLORIDA.

Board of health:
Calvin T. Young, M. D., president, Plant City.
Charles H. Mann, Jacksonville.
F. Clifton Moor, M. D., Tallahassee.

Executive health officer:
*Raymond C. Turck, M. D., State health officer, Jacksonville.

Bureau of vital statistics:
*Stuart G. Thompson, D. P. H., director, Jacksonville.

Bureau of sanitary engineering:
*George W. Simons, Jr., director, Jacksonville.

Bureau of diagnostic laboratories:
*B. L. Arms, M. D., director, Jacksonville.

Bureau of communicable disease and health units:
*George A. Dame, M. D., director, Jacksonville.

Bureau of child welfare:
*William B. Keating, M. D., director, Jacksonville.

Appropriation for health department:
One-quarter mill tax levied upon the assessable property of the State; reduced from one-half mill by 1921 legislature.

Fiscal year ends December 31.

Publications issued by health department:
Pamphlets covering all phases of public health. Public health information disseminated through the weekly and daily papers of the State. Florida Health Notes.

GEORGIA.

Board of health:
W. H. Doughty, Jr., M. D., president, Augusta.
James H. McDuffle, M. D., vice president, Columbus.
T. F. Abercrombie, M. D., secretary, Atlanta.
Charles H. Richardson, M. D., Macon.
A. D. Little, M. D., Thomasville.
John W. Daniel, M. D., Savannah.
W. I. Hailey, M. D., Hartwell.
A. L. Crittenden, M. D., Shelton.
Robert F. Maddox, Atlanta.
A. C. Shamblin, M. D., Rome.
J. C. Verner, M. D., Commerce.
J. L. Walker, M. D., Waycross.
M. S. Brown, M. D., Fort Valley.
M. L. Brittain, State superintendent of schools, ex officio, Atlanta.
Peter F. Bahnsen, State veterinarian, ex officio, Atlanta.

Executive health officer:
*T. F. Abercrombie, M. D., commissioner, Atlanta.
*Joe P. Bowdoin, M. D., deputy commissioner, Atlanta.

Division of venereal disease control:
*Joe P. Bowdoin, M. D., director, Atlanta.

Division of county health work:
*M. F. Haygood, M. D., director, Atlanta.

Division of malaria control:
*M. A. Fort, M. D., director, Atlanta.

Division of laboratories:
*T. F. Sellers, M. Sc., director, Atlanta.

Division of sanitary engineering:
*H. C. Woodfall, director, Atlanta.

Division of serology:
*E. L. Webb, director, Atlanta.

State tuberculosis sanatorium:
*Edson W. Glidden, 2d, M. D., superintendent, Alto.

Bureau of vital statistics:
*W. A. Davis, M. D., director, Atlanta.

Division of child hygiene:
*Dorothy Bocker, M. D., director, Atlanta.
*Alice Moses, M. D., assistant director, Atlanta.

Georgia training school for mental defectives:
*George H. Preston, M. D., Gracewood.

Division of accounting and purchasing:
*C. L. Tinsley, director, Atlanta.

Appropriations for the fiscal year ending Dec. 31, 1922:

General appropriation.....	\$81,431.00
State tuberculosis sanatorium.....	50,000.00
Venereal disease control.....	10,000.00
Georgia training school for mental defectives.....	25,000.00
Total appropriation by legislature.....	166,431.00
Venereal disease control (Federal Government funds).....	16,163.64
Central administration—county health work (International Health Board funds).....	3,845.00
Central administration—malaria control (International Health Board funds).....	2,017.08
Maternity and infancy (Federal Government funds).....	11,000.00
Grand total.....	189,456.72

1 For fiscal year ending June 30, 1923.

HAWAII.

Board of health:
 F. E. Trotter, M. D., president and executive officer, Honolulu.
 Harry Irwin, attorney general, Honolulu.
 P. Withington, M. D., Honolulu.
 D. S. Bowman, Honolulu.
 E. A. Mott-Smith, Honolulu.
 J. Ordenstein, Honolulu.
 S. S. Paxson, Honolulu.*

Executive health officer:
 *F. E. Trotter, M. D., president of the board of health, Honolulu.

Secretary:
 *M. R. Weir, Honolulu.

Bacteriologist:
 A. N. Sinclair, M. D., Honolulu.

Tuberculosis bureau:
 A. L. Davis, M. D., director, Honolulu.

Medical inspector of schools:
 A. L. Davis, M. D., Honolulu.

Health officer:
 James T. Wayson, M. D., Honolulu.

Sanitary engineer:
 *S. W. Tay, Honolulu.

Food commissioner and analyst:
 *M. B. Boires, Honolulu.

Oahu insane asylum:
 *W. A. Schwallie, M. D., superintendent, Honolulu.

Leper settlement:
 *J. D. McVeigh, superintendent, Kalaupapa, Molokai.

*W. J. Goodhue, M. D., resident physician, Kalaupapa, Molokai.

Chief sanitary inspector, Hawaii:
 C. Charlock, Hilo.

Chief sanitary inspector, Maui:
 G. Weight, Waiuku.

Chief sanitary inspector, Kauai:
 F. B. Cook, Waimea.

Appropriations for the biennial period ending June 30, 1923:

General expenses.....	\$67,300
Vital statistics.....	17,680
Sanitary engineering.....	15,600
Sanitation.....	147,240
Pure food.....	22,500
Bacteriological bureau.....	18,000
Quarantine and medical service.....	127,340
Rat campaign.....	24,000
Mosquito campaign.....	4,800
Medical and dental supervision and treatment of school children.....	54,000
Tuberculosis.....	302,000
Care of lepers and their children.....	632,370
Care of the insane.....	293,596
Miscellaneous.....	6,150
Total.....	1,732,576

Publications issued by health department:

Annual report of president.

Registrar-General's report.

IDAHO.

Department of public welfare:

*David Burrill, commissioner.
 *F. W. Almond, M. D., medical adviser.
 *Paul A. Mader, bacteriologist.

IDAHO—Continued.

Department of public welfare—Continued.

*William Vernon Leonard, chemist.
 *A. H. Wilson, dairy, food, drug, hotel, and sanitary inspector.
 *C. K. Macey, dairy, food, drug, hotel, and sanitary inspector.

Executive health officer:

*David Burrill, commissioner of public welfare, Boise.

Appropriations for biennial period ending Jan. 3, 1923:

Salaries and wages:	
Commissioner.....	\$7,200
Medical adviser.....	10,000
Bacteriologist.....	4,800
Chemist.....	4,000
Inspector.....	4,000
Inspector.....	4,000
Other salaries.....	12,800
Expenses other than salaries.....	14,700
Venereal disease control.....	5,000
Total.....	67,300

ILLINOIS.

Director of public health:

*Isaac D. Rawlings, M. D., Springfield.

Assistant director of public health:

*Thomas H. Leonard, M. D.

Division of sanitation and engineering:

*Harry F. Ferguson, C. E., chief sanitary engineer.

Division of communicable diseases:

*J. J. McShane, M. D., D. P. H., chief.

Division of child hygiene and public health nursing:

*C. W. East, M. D., chief.

Division of tuberculosis:

*Thomas H. Leonard, M. D., acting chief.

Division of laboratories:

*Thomas G. Hull, Ph. D., chief.

Division of vital statistics:

*Sheldon L. Howard, registrar.

Division of public health instruction:

*Baxter K. Richardson, chief.

Division of social hygiene:

*C. C. Copelan, M. D., chief.

Division of hotel and lodging-house inspection:

*W. W. McCulloch, superintendent.

Appropriations for fiscal year ending June 30, 1923:

Salaries.....	\$318,900
Salaries State officers.....	12,600
Office expenses.....	16,495
Traveling expenses.....	77,300
Operating, supplies and expenses.....	85,000
Equipment and repairs.....	12,735
Contingent.....	29,000
Printing.....	20,500
Total.....	572,590

Publications issued by health department:

Illinois Health News (monthly).

Social Hygiene (monthly).

• Weekly press bulletin.

INDIANA.

Board of health:

John H. Hewitt, M. D., president, Terre Haute.
 Hugh A. Cowing, M. D., vice president, Muncie.
 Chas. B. Korn, M. D., La Fayette.
 Adah McMahan, M. D., La Fayette.
 J. N. Hurty, M. D., secretary, Indianapolis.

Executive health officer:

*J. N. Hurty, M. D., State health commissioner, Indianapolis.

Assistant State health commissioner:

*W. F. King, M. D., Indianapolis.

Division of statistics:

*H. M. Wright, director, Indianapolis.

Laboratory of hygiene:

*A. G. Long, M. D., C. P. H., director, Indianapolis.

Division of food and drugs:

*Ivy Miller, State food and drug commissioner, Indianapolis.

Travelling milk laboratory:

*Frank C. Wilson, director.

Water and sewage laboratory:

*L. A. Geupel, sanitary engineer, Indianapolis.

Division of child hygiene:

*Ada E. Schweitzer, M. D., director, Indianapolis.

Division of tuberculosis:

*H. W. McKane, M. D., director, Indianapolis.

Division of epidemiology:

*H. M. Wright, M. D., director, Indianapolis.

Division of venereal diseases:

*W. F. King, M. D., director, Indianapolis.

Division of school hygiene:

*H. R. Condrey, director, Indianapolis.

Division of housing:

*W. F. Sharpe, director, Indianapolis.

Appropriations for fiscal year ending Sept.

30, 1923:

Salaries (specific).....	\$4,000
Board of health office.....	30,000
Food and drugs.....	30,000
Weights and measures.....	10,000
Laboratory of hygiene.....	12,000
Hydrophobia fund.....	6,000
Baby book.....	5,000
Division of tuberculosis.....	10,000
Division of infant and child hygiene.....	20,000
Division of rural hygiene.....	25,000
Division of venereal diseases.....	42,300
Housing.....	20,000
 Total.....	211,300

Publication issued by health department:

Monthly bulletin.

IOWA.

Board of health:

Frank T. Launder, M. D., president, Garwin.
 N. E. Kendall, governor, Des Moines.
 W. C. Ramsay, secretary of state, Des Moines.
 G. C. Haynes, auditor of state, Des Moines.
 W. J. Burbank, treasurer of state, Des Moines.
 Hans V. Pedersen, sanitary engineer, Des Moines.
 G. F. Severs, M. D., Centerville.
 Henry C. Eschbach, M. D., Albia.
 C. S. Grant, M. D., Iowa City.

IOWA—Continued.

Executive health officer:

*Rodney P. Fagen, M. D., State health commissioner, Des Moines.

Assistant secretary:

*H. W. Grefe, Des Moines.

Chief clerk:

*L. V. Clemens, Des Moines.

Laboratories:

*Don M. Griswold, M. D., director, Iowa City.

Sanitary engineer:

*Hans V. Pedersen, Des Moines.

Bureau of venereal diseases:

W. S. Conkling, M. D., director.

Lecturer in charge of women's work:

Jeannette F. Throckmorton, M. D.

State housing commissioner:

*Edwin H. Sands.

Appropriations for fiscal year ending June

30, 1922:

State board of health work.....	\$10,000
Housing department.....	5,000
Bacteriological laboratory.....	15,000
Antitoxin department.....	2,000
 Vital statistics.....	10,000
Salaries of employees.....	11,400
Social hygiene.....	25,000
 Total.....	78,400

The above does not include special appropriation for clerical assistance.

Publications issued by health department:

Biennial report.

Quarterly bulletin.

KANSAS.

Board of health:

Jos. E. Hawley, M. D., president, Burr Oak.

J. J. Entz, M. D., vice president, Marion.

H. L. Aldrich, M. D., Caney.

W. M. Earnest, M. D., Washington.

Clay E. Coburn, M. D., Kansas City.

O. D. Walker, M. D., Salina.

J. T. Axtell, M. D., Newton.

C. H. Ewing, M. D., Larned.

C. H. Lerrigo, M. D., Topeka.

J. G. Egan, attorney.

Executive health officer:

*S. J. Crumble, M. D., secretary State board of health, Topeka.

Division of vital statistics:

Chas. H. Lerrigo, M. D., State registrar, Topeka.

Division of communicable diseases and sanitation:

A. J. Warren, M. D., chief, Topeka.

Division of food and drugs:

Frank Rowland, assistant chief food and drug inspector, Topeka.

Division of child hygiene:

Helen Moore, M. D., chief, Topeka.

Division of water and sewage:

Prof. Albert Jewell, chief, Lawrence.

Division of public health education:

S. J. Crumble, M. D., director, Topeka.

Division of venereal diseases:

B. K. Kilbourne, acting asst. surg., U. S.

P. H. S., director, Topeka.

Division of public health nursing:

Helen A. Cron, R. N., supervisor, Topeka.

August 4, 1922.

KANSAS—Continued.

Water and sewage laboratories at Kansas University:
 Prof. Albert Jewell, director, Lawrence.

Food laboratory at Kansas University:
 Prof. E. H. S. Bailey, director of food analyses, Lawrence.

Drug laboratory at Kansas University:
 Prof. L. E. Sayre, director of drug analyses, Lawrence.

Food laboratory at Kansas Agricultural College:
 Prof. Wm. King, director of food analyses, Manhattan.

Public health laboratory, Topeka:
 William Levin, D. P. H., director, Topeka.

Appropriations for fiscal year ending June 30, 1922:

Salaries.....	\$23,700
Miscellaneous.....	8,000
Water and sewage division.....	5,000
Free distribution of antitoxins, etc.....	2,500
Suppression of communicable diseases.....	10,000
Public health exhibit car.....	3,000
Laboratory of hygiene.....	5,000
Division of child hygiene.....	7,500
Division of food and drugs.....	7,500
Division of venereal diseases.....	7,500
Total.....	79,700

Other sources of revenue:
 Marriage fees, approximately \$11,000.
 Water and ice analyses fees, approximately \$14,000.

Food and drug laboratories at Kansas University maintained by university maintenance fund, and food laboratory at Kansas Agricultural College maintained by agricultural college maintenance fund.

Publications issued by health department:
 Monthly bulletin.
 Biennial report.

KENTUCKY.

Board of health:
 L. S. McMurtry, M. D., president, Louisville.
 W. W. Richmond, M. D., Clinton.
 George T. Fuller, M. D., Mayfield.
 H. H. Carter, D. O., Shelbyville.
 Joseph E. Wells, M. D., Cynthiana.
 George S. Coon, M. D., Louisville.
 F. A. Stine, M. D., Newport.
 O. C. Dilly, M. D., Lousiville.
 A. T. McCormack, M. D., secretary, Louisville.

Executive health officer:
 *A. T. McCormack, M. D., State health officer, Louisville.

Bureau of vital statistics:
 *J. F. Blackerby, director, Louisville.

Bureau of bacteriology:
 *Lillian H. South, M. D., director, Louisville.

Bureau of sanitary engineering:
 *F. C. Dugan, State sanitary engineer, Louisville.

Bureau of food, drugs, and hotels:
 *Sarah H. Vance, director, Louisville.

Bureau of venereal diseases:
 *Jethra Hancock, M. D., Lousiville.

KENTUCKY—Continued.

Bureau of tuberculosis:
 *J. S. Lock, M. D., director, Louisville.

Bureau of public health nursing:
 *Marian Williamson, R. N., director, Louisville.

Bureau of child hygiene:
 *Annie S. Veech, M. D., Louisville.

Bureau for prevention of trachoma and blindness:
 *C. B. Keibert, M. D. director, Louisville.

Bureau of public health education:
 *Helen Donaldson, R. N., acting director, Louisville.

Bureau of county health work:
 *P. E. Blackerby, M. D., director, Louisville.

Appropriation for fiscal year ending June 30, 1923: \$257,500.

Publication issued by health department:
 Monthly bulletin.

LOUISIANA.

Board of health:
 Oscar Dowling, M. D., president, New Orleans.
 J. M. Mosely, M. D., Arcadia.
 T. T. Tarlton, M. D., Grand Coteau.
 L. C. Chamberlain, M. D., New Orleans.
 T. A. Roy, M. D., Mansura.
 B. A. Ledbetter, M. D., New Orleans.
 M. W. Swords, M. D., secretary, New Orleans.

Executive health officer:
 *Oscar Dowling, M. D., president State board of health, New Orleans.

Bacteriologist:
 W. H. Seemann, M. D., New Orleans.

Registrar:
 J. Geo. Dempsey, M. D., New Orleans.

Sanitary engineer:
 John H. O'Neill, New Orleans.

Child hygiene:
 Agnes Morris, New Orleans.
 Maud Loeber, M. D., medical director, New Orleans.

Public health nursing:
 Mrs. M. Coale Alpha, New Orleans.

Analyst:
 J. Roy Keeny, Phar. D., New Orleans.

Epidemiologist:
 C. L. Williams, surgeon, U. S. P. H. S., New Orleans.

Bureau of venereal diseases:
 Leonard C. Scott, acting asst. surg., U. S. P. H. S., New Orleans.

Medical entomology:
 Geo. E. Beyer, New Orleans.

Appropriations for fiscal year ending June 30, 1923:

Isolation hospital at Alexandria.....	\$12,500
Venereal disease control work.....	12,500
General.....	75,000
Total.....	100,000

Other source of revenue:
 Fees from inspection of oil.

Publications issued by health department:
 Monthly bulletin.
 Quarterly bulletin.
 Annual almanac.
 Biennial report.
 Miscellaneous leaflets.

MAINE.

Public health council:
 C. F. Kendall, M. D., chairman, Augusta.
 S. J. Beach, M. D., Portland.
 J. Q. Guinac, Bangor.
 Hiram Ricker, South Poland.
 R. D. Small, M. D., Portland.

Executive health officer:
 *C. F. Kendall, M. D., State commissioner of health, Augusta.

Division of administration:
 *C. F. Kendall, M. D., Augusta.

Division of communicable disease:
 *A. G. Young, M. D., director, Augusta.

Division of diagnostic laboratories:
 *John Hewat, M. D., director, Augusta.

Division of sanitary engineering:
 *Walter J. Brennan, acting director, Augusta.

Division of vital statistics:
 *C. F. Kendall, M. D., State registrar, Augusta.

Division of venereal diseases:
 *George H. Coombs, M. D., director, Augusta.

Division of public health nursing and child hygiene:
 *Edith L. Soule, R. N., Augusta.

District health officers:
 *J. L. Pepper, M. D., South Portland.
 *E. P. Goodrich, M. D., Lewiston.
 *J. W. Loughlin, M. D., Damariscotta.
 *H. L. Lombard, M. D., Presque Isle.
 *H. D. Worth, M. D., Bangor.
 *J. F. Stevens, M. D., Millinocket.
 *G. H. Hutchins, M. D., Waterville.
 *A. L. Smith, M. D., Machias.

Appropriations for fiscal year ending June 30, 1923:

Salaries and clerk hire.....	\$28,000
Office expense and epidemic fund.....	18,000
District and local health officers.....	35,000
Venereal disease control work.....	10,000
Total.....	91,000

Other source of revenue:
 Census Bureau, Washington, D. C., about \$800.

Publications issued by the department of health:
 Annual report of department of health.
 Annual report on vital statistics.
 Bimonthly bulletin.

MARYLAND.

Board of health:
 Wm. H. Welch, M. D., president, Baltimore.
 Alexander Armstrong, attorney general, Baltimore.
 John S. Fulton, M. D., secretary, Baltimore.
 Wm. W. Ford, M. D., Baltimore.
 C. Hampson Jones, M. D., Baltimore.
 Tolley A. Biays, Baltimore.
 Benjamin C. Perry, Bethesda.
 E. F. Kelly, Phar. D., Baltimore.

Executive health officer:
 *John S. Fulton, M. D., State health officer, Baltimore.

Bureau of communicable diseases:
 *Robert H. Riley, M. D., chief, Baltimore.

Bureau of vital statistics:
 Frederic V. Beitler, M. D., chief, Baltimore.

Food and drug commissioner:
 *A. L. Sullivan, chief, Baltimore.

MARYLAND—Continued.

Bureau of bacteriology:
 *R. C. Salter, chief, Baltimore.

Bureau of sanitary engineering:
 Robert B. Morse, C. E., chief, Baltimore.

Bureau of chemistry:
 Wyatt W. Randall, Ph. D., chief, Baltimore.

Bureau of accounts and property:
 *Walter N. Kirkman, chief, Baltimore.

Appropriations for fiscal year ending Sept. 30, 1921:

Salaries.....	\$150,000
Expenses.....	84,000
Total.....	210,000

Publications issued by health department:
 Annual report.
 Health officer's bulletin.

MASSACHUSETTS.

Public health council:
 Eugene R. Kelley, M. D., chairman, Boston.
 Roger I. Lee, M. D., Cambridge.
 J. E. Lamoureux, M. D., Lowell.
 Richard C. Strong, M. D., Boston.
 G. C. Whipple, S. B., Cambridge.
 Warren C. Jewett, Worcester.
 Sylvester E. Ryan, M. D., Springfield.

Executive health officer:
 *Eugene R. Kelley, M. D., State commissioner of public health, Boston.

Division of administration:
 _____, director.

Division of communicable diseases:
 *Bernard W. Carey, M. D., director, Boston.
 _____, epidemiologist.

Edith A. Beckler, bacteriologist, Boston.

Division of sanitary engineering:
 *X. H. GooInough, director and chief engineer, Boston.

Division of water and sewage laboratories:
 *H. W. Clark, director and chemist, Boston.

Division of biologic laboratories:
 *Benjamin White, Ph. D., director and pathologist, Boston.

Division of food and drugs:
 *Hermann C. Lythgoe, director and analyst, Boston.

Division of hygiene:
 *Merrill E. Champion, M. D., director, Boston.

Division of tuberculosis:
 *Sumner H. Remick, M. D., director, Boston.

Appropriations for fiscal year ending Nov. 30, 1922.

Division of administration.....	\$28,600.00
Division of hygiene.....	58,700.00
Division of communicable diseases	79,370.00
Subdivision of venereal diseases..	32,300.00
Production and distribution of anti-toxin and vaccine.....	60,100.00
Wassermann laboratory.....	15,207.00
Manufacture and distribution of arsphenamine.....	21,820.00
Division of food and drug inspection.....	42,600.00
Divisions of water supply and sewage disposal.....	90,575.00

MASSACHUSETTS—Continued.

Appropriations for fiscal year ending Nov. 30, 1922—Continued.	
State examiners of plumbers.....	\$5,000.00
Division of tuberculosis (including subsidies to cities and towns).....	174,555.22
Maintenance of four State sanatoria.....	915,475.00
Services of caretaker, etc., for Penikese Island (for lepers).....	1,500.00
Total.....	1,525,802.22

Publications issued by department of public health:	
Monthly bulletin.	
Annual report.	
Miscellaneous pamphlets dealing with health matters.	

MICHIGAN.

Advisory council of health:	
Guy L. Kiefer, M. D., president, Detroit.	
C. C. Stemons, M. D., Grand Rapids.	
Frank M. Gowdy, M. D., St. Joseph.	
Leland W. Carr, Lansing.	
Robert B. Harkness, Houghton.	

Executive health officer:	
*Richard M. Olin, M. D., State health commissioner, Lansing.	

Deputy health commissioner:	
*George H. Ramsey, M. D., Lansing.	
Bureau of engineering:	
*E. D. Rich, C. E., director.	
*William Hirn, C. E., assistant engineer.	
*Ernest F. Badger, chemical engineer.	
*Warner C. Brockway, B. S. E., assistant engineer.	
*Albert T. Kunze, B. S. E., assistant engineer.	
*Willard F. Shepherd, B. S. E., assistant engineer.	
*Chas. L. Orr, water inspector.	

Bureau of laboratories:	
*C. C. Young, Ph. D., director.	
*Minna Crooks, R. N., bacteriologist.	
*R. L. Kahn, D. Sc., immunologist.	
*A. B. Haw, clinical pathologist.	
*S. R. Johnson, D. V. S., veterinary pathologist.	
*Chas. L. Bliss, chemist.	

Bureau of nursing and child hygiene:	
*Blanche Haines, M. D., director.	

Bureau of communicable diseases and vital statistics:	
*W. J. V. Deacon, M. D., D. P. H., director.	

Bureau of dentistry:	
*K. R. Gibson, D. D. S., director.	

Bureau of institutional health administration:	
*Robert A. MacGregor, M. D., director.	

Bureau of education:	
*Marjorie Delavan, director.	

Bureau of embalming:	
*F. J. Plenta, director.	

Appropriations for fiscal year ending June 30, 1923:	
Personal service.....	\$167,600
Supplies.....	26,555
Contractual service.....	25,000
Hospitalization, care and treatment..	25,000

MICHIGAN—Continued.

Appropriations for fiscal year ending June 30, 1923—Continued.	
Maintenance of equipment.....	\$335
Other equipment.....	6,370
Total.....	251,250
Free antitoxin.....	75,000
Total.....	326,250

Publications issued by health department:

Monthly bulletin.	
Annual report.	
Communicable disease pamphlets.	
Sex hygiene pamphlets.	
Child hygiene pamphlets.	
Engineering bulletins.	

MINNESOTA.

Board of health:

C. L. Scofield, M. D., president, Benson.	
S. Marx White, M. D., vice president, Minnapolis.	
N. M. Watson, M. D., Red Lake Falls.	
A. E. Hedback, M. D., Minneapolis.	
L. P. Wolff, C. E., St. Paul.	
O. W. Holcomb, M. D., St. Paul.	
R. C. Hunt, M. D., Fairmont.	
H. R. Weirick, M. D., Hibbing.	
—(vacant).	

Executive health officer:

*A. J. Chesley, M. D., secretary and executive officer, St. Paul.	
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Division of records:

*O. C. Pierson, director, St. Paul.	
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Division of preventable diseases:

*O. McDaniel, M. D., director, Minneapolis.	
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Division of sanitation:

*H. A. Whittaker, director, Minneapolis.	
--	--

Division of vital statistics:

*Mrs. Gerda C. Pierson, director, St. Paul.	
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Division of venereal diseases:

H. G. Irvine, M. D., director, Minneapolis.	
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*L. W. Feezer, assistant director, Minneapolis.	
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*Margaret Sheridan, educational supervisor.	
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*Audrey Walton, chief social worker.	
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Division of child hygiene:

*E. C. Hartley, M. D., director, Minneapolis.	
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Appropriations for fiscal year ending June 30, 1923:

General fund.....	\$20,000
Vital statistics.....	10,000
Communicable diseases.....	25,000
Laboratories.....	40,000
Sanitary engineering.....	7,000
Free antitoxin.....	10,000
Prevention of blindness.....	1,000
Venereal diseases.....	30,000

Total.....	143,000
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Other sources of revenue:

Aid from county and city for branch laboratory at Duluth, \$900.	
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From Minnesota Public Health Association for division of child hygiene, \$5,000.	
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Publications issued by health department:

Educational pamphlets.	
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Biennial report.	
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MISSISSIPPI.

Board of health:

W. W. Hall, M. D., president, Shelby.
 J. H. McNeill, M. D., Olive Branch.
 B. Lampton Crawford, M. D., Tyertown.
 T. F. Elkin, M. D., Tupelo.
 H. F. Garrison, M. D., Clinton.
 L. L. McDougal, M. D., Booneville.
 C. D. Mitchell, M. D., Jackson.
 I. L. Parsons, M. D., Brookhaven.
 T. W. Reagan, M. D., Union.
 E. M. Gavin, M. D., Ovett.
 W. H. Watson, M. D., Brandon.
 J. H. Windham, M. D., Ecru.

Executive health officer:

*W. S. Leathers, M. D., executive officer, State board of health, Jackson.

Bureau of vital statistics:

*R. W. Hall, M. D., director, Jackson.

Bureau of child welfare:

*F. J. Underwood, M. D., director, Jackson.

Hygienic laboratory:

*C. R. Stingley, M. D., director, Jackson.

Bureau of sanitary inspection:

*W. D. Beacham, M. D., chief sanitary inspector, Jackson.

Bureau of sanitary engineering:

*H. A. Kroese, C. E., director, Jackson.

Bureau of rural sanitation:

*W. S. Leathers, M. D., acting director, Jackson.

*C. M. Shipp, M. D., epidemiologist in charge of malaria-control work, Jackson.

Bureau of venereal diseases:

*Hardie Hays, M. D., director, Jackson.

Bureau of public-health nursing:

*Mary D. Osborne, R. N., director, Jackson.

Appropriations for fiscal year ending Dec. 31, 1922:

Administrative office.....	\$23,000
Bureau of vital statistics.....	12,000
Municipal sanitation.....	12,000
Rural sanitation.....	27,000
Hygienic laboratory.....	20,000
Child welfare.....	30,000
Venereal diseases.....	16,000
Total.....	140,000

Publications issued by health department:

Biennial report.

Monthly bulletin.

MISSOURI.

Board of health:

R. S. Vitt, M. D., president, St. Louis.
 E. E. Brunner, M. D., vice president, Carrollton.
 Franklin E. Murphy, M. D., Kansas City.
 Cortez F. Enloe, M. D., secretary, Jefferson City.
 E. P. North, M. D., St. Louis.
 T. A. Son, M. D., Bonne Terre.
 T. H. Wilcoxen, M. D., Bowling Green.

Executive health officer:

*Cortez F. Enloe, M. D., Secretary State board of health and State commissioner of health, Jefferson City.

MISSOURI—Continued.

Bureau of vital statistics:

*Jas. Wark, statistician, Jefferson City.

Division of child hygiene:

*Irl Brown Krause, M. D., director, Jefferson City.

Division of rural sanitation:

*Thomas Parran, M. D., director, Jefferson City.

Division of venereal diseases:

*R. L. Russell, M. D., director, Jefferson City.

Division of sanitary engineering:

*George W. Putnam, director, Jefferson City.

Public health laboratories:

M. P. Ravenel, M. D., director, State University, Columbia.

Appropriations for biennial period ending Dec. 31, 1922:

Board of health fund, bureau of licensure.....	\$15,000
Salaries.....	49,600
Division of venereal diseases.....	19,000
Public health and child hygiene exhibits.....	5,000
Traveling expenses.....	10,000
Printing.....	9,000
Postage.....	4,000
Laboratory and contingent expense.....	4,000
Cooperative rural sanitation fund.....	20,000
Total.....	135,600

MONTANA.

Board of health:

B. L. Pampel, M. D., president, Livingston.

D. J. Donohue, M. D., vice president, Butte.

E. G. Balsam, M. D., Billings.

E. M. Porter, M. D., Great Falls.

L. H. Fligman, M. D., Helena.

Executive health officer:

*W. F. Cogswell, M. D., secretary, Helena.

Division of communicable diseases:

*Ernest D. Hitchcock, M. D., epidemiologist, Helena.

Division of child welfare:

*John J. Sippy, M. D., director, Helena.

*Mary Margaret Muckley, R. N., director public-health nursing, Helena.

Division of food and drugs:

*H. M. Shea, director, Helena.

Division of social hygiene:

*F. J. O'Donnell, director, Helena.

Division of vital statistics:

*W. F. Cogswell, M. D., State registrar, Helena.

Division of water and sewage:

W. M. Cobleigh, director, Bozeman.

*H. B. Foote, bacteriologist, Bozeman.

Water and sewage laboratory and food and drug laboratory:

W. M. Cobleigh, director, Bozeman.

E. J. Quinn, analyst, Bozeman.

Hygienic laboratory:

*Ernest D. Hitchcock, M. D., director, Helena.

*Richard M. Johnson, bacteriologist, Helena.

MONTANA—Continued.

Appropriations for the year ending June 30, 1923:

[Appropriations for salaries and expense of State board of health are made in lump sum. The budget given is tentative and not arbitrarily fixed. Unexpended sums of one division may be diverted to other divisions when deemed necessary.]

General administration—

Salaries.....	36,800
Expenses.....	4,500
Division of child welfare.....	4,255
Hygienic laboratory.....	10,190
Inspection of water plants.....	4,325
Food and water laboratory.....	3,495
Enforcing food and drugs law.....	4,690
Division of communicable diseases.....	11,930
Social hygiene division.....	4,645
Division of vital statistics.....	2,900
Board of entomology (Rocky Mountain spotted fever work).....	9,600
Total.	67,340

Other source of revenue:

Fees for embalmers' licenses.

Publications issued by health department:

Monthly bulletin.

Special bulletins on communicable diseases.

Biennial report.

NEBRASKA.

Department of public welfare:

*H. H. Antles, secretary, Lincoln.

Bureau of health—

Executive health officer and epidemiologist—

*I. H. Dillon, M. D., chief of bureau of health, Lincoln.

Bacteriologist—

*L. O. Vose, Lincoln.

Division of venereal diseases—

*P. H. Bartholomew, M. D., director, Lincoln.

Statistician—

*May F. Hyland, Lincoln.

Division of child hygiene—

*Margaret McGreevy, R. N., director.

Sanitary engineer—

*R. N. Tracy, C. E., Lincoln.

Medical examining board—

J. E. Spatz, M. D., Fairfield.

H. J. Lehnhoff, M. D., Lincoln.

E. T. McGuire, M. D., Mead.

Appropriations for biennial period ending June 30, 1923:

Salaries.....	\$59,760
Maintenance.....	46,170
Total.	105,930

NEVADA.

Board of health:

Emmet D. Boyle, governor, president, Carson City.

S. L. Lee, M. D., secretary, Carson City.

George Brodigan, secretary of state.

W. H. Head, M. D., Reno.

Henry Albert, M. D., Reno.

NEVADA—Continued.

Executive health officer:

*S. L. Lee, M. D., secretary State board of health, Carson City.

State hygienic laboratory at State university:

Henry Albert, M. D., director, Reno.

Appropriations for fiscal year ending Dec. 31, 1921:

Salary of secretary.....	\$5,000
State board of health.....	3,300
Total.	8,300

Publications issued by health department:

Biennial report.

Special bulletins.

NEW HAMPSHIRE.

Board of health:

Robert Fletcher, Ph. D., C. E., president, Hanover.

D. E. Sullivan, M. D., Concord.

George C. Wilkins, M. D., Manchester.

Sibley G. Merrill, M. D., Concord.

Albert O. Brown, governor, Manchester.

Oscar L. Young, attorney general, Leconia.

Executive health officer:

*Charles Duncan, M. D., secretary State board of health, Concord.

Laboratory of hygiene:

*Charles D. Howard, chemist, Concord.

*Clara Israeli, M. D., bacteriologist, Concord.

William R. McLeod, assistant bacteriologist, Concord.

*Joseph X. Duval, inspector, Concord.

*Charles L. Pool, sanitary engineer.

Robert Fletcher, C. E., engineer, Hanover.

Bacteriological laboratory:

H. N. Kingsford, M. D., bacteriologist, Hanover.

Venereal disease division:

*Charles A. Weaver, M. D., Manchester.

Appropriations for fiscal year ending June 30, 1922:

State board of health.....	\$25,150
Laboratory of hygiene.....	15,500
Vital statistics.....	2,800
Total	44,450

Publications issued by health department:

Bulletin.

Biennial report.

NEW JERSEY.

Board of health:

Henry Spence, M. D., president, Jersey City.

Thomas B. Lee, M. D., vice president, Camden.

Oliver Kelly, Oak Tree.

Clyde Potts, C. E., Morristown.

H. E. Winter, V. M. D., Plainfield.

J. Oliver McDonald, M. D., Trenton.

Harold J. Harder, C. E., Paterson.

David D. Chandler, Newark.

Mrs. James E. Van Horne, Trenton.

Miss Margaret McNaughton, Jersey City.

J. E. H. Guthrie, D. D. S., Newark.

Executive health officer:

*Jacob C. Price, M. D., director of health, Trenton.

NEW JERSEY—Continued.

Laboratory of hygiene:
*R. B. Fitz-Randolph, chief, Trenton.
Bureau of administration:
*Chas. J. Merrell, chief, Trenton.
Bureau of food and drugs:
*Walter W. Seaford, chief, Trenton.
Bureau of medical supervision:
*A. C. Hunt, M. D., chief, Trenton.
Bureau of child hygiene:
Julius Levy, M. D., consultant, Trenton.
Bureau of local health administration:
*David C. Bowen, chief, Trenton.
Bureau of engineering:
*H. P. Croft, chief, Trenton.
Bureau of vital statistics:
*David S. South, chief, Trenton.
Bureau of venereal disease control:
A. J. Casselman, M. D., chief, Trenton.

Appropriations for fiscal year ending June 30, 1923:

Salaries.....	\$141,600
Miscellaneous.....	68,800
Child hygiene.....	75,000
Venereal disease control.....	20,000
Total.....	305,400

Publications issued by health department:
Monthly Bulletin.
Annual Report.

NEW MEXICO.

Board of public welfare:
Mrs. A. Otero-Warren, chairman, Santa Fe.
L. S. Peters, M. D., Albuquerque.
Mrs. G. W. Prichard, Santa Fe.
Mrs. Max Nordhaus, Albuquerque.
Charles Lembke, Albuquerque.
Executive health officer:
*G. S. Luckett, M. D., director of public health, Santa Fe.
Divisions of preventable diseases and vital statistics:
*G. S. Luckett, M. D., chief, Santa Fe.
Division of sanitary engineering and sanitation:
*H. F. Gray, C. E., Gr. P. H., chief, Santa Fe.
Divisions of public health nursing and child hygiene:
*Margaret Tupper, R. N., Santa Fe.
Division of county health work:
*(Appointment pending.)
Public health laboratory:
*Myrtle Greenfield, chief, Albuquerque.
Appropriation for fiscal year ending Nov. 30, 1923, \$27,000.

NEW YORK.

Public health council:
Hermann M. Biggs, M. D., LL. D., chairman, Albany.
Homer Folks, LL. D., New York.
Simon Flexner, M. D., LL. D., New York.
Henry N. Ogden, C. E., Ithaca.
T. Mitchell Prudden, M. D., LL. D., New York.
Jacob Goldberg, M. D., Buffalo.
Stanton P. Hull, M. D., Petersburg.
Executive health officer:
Hermann M. Biggs, M. D., LL. D., commissioner of health, Albany.

NEW YORK—Continued.

Deputy commissioner of health:
*Matthias Nicoll, jr., M. D., Albany.
Secretary:
*Curtis E. Lakeman, Albany.
Executive clerk:
*Fenimore D. Beagle, Albany.
Division of public health education:
*B. R. Rickards, director, Albany.
Division of sanitation:
*Charles A. Holmquist, C. E., director, Albany.
Division of vital statistics:
*Otto R. Eichel, M. D., director, Albany.
Division of child hygiene:
*Florence L. McKay, M. D., director, Albany.
Division of communicable diseases:
*Edward S. Godfrey, M. D., director, Albany.
Division of tuberculosis:
*Frederick W. McSorley, M. D., director, Albany.
Division of venereal diseases:
*J. S. Lawrence, M. D., director, Albany.
Division of laboratories and research:
*Augustus B. Wadsworth, M. D., director, Albany.
Division of public health nursing:
*Mathilde S. Kuilmann, R. N., director, Albany.
Appropriations for fiscal year ending June 30, 1923:

Personal service.....	\$582,730
Maintenance and operation.....	300,500
Division of maternity, infancy and child hygiene.....	130,000
Total.....	1,013,230
Construction of addition to laboratories.....	98,000

Other sources of revenue:
Fees from certified transcripts of birth, death, and marriage certificates, and registration of laboratories, approximately \$1,000 per annum.
Licensing laboratories, \$175.
Sale of serums, \$1,500.

Publications issued by health department:
Monthly Health News.
Health Officers' Bulletin.
Public Health Nurses' Bulletin.
Vital Statistics Bulletin.

NORTH CAROLINA.

Board of health:
J. Howell Way, M. D., president, Waynesville.
Richard H. Lewis, M. D., LL. D., Raleigh.
Charles E. Waddell, C. E., Asheville.
Thomas E. Anderson, M. D., Statesville.
A. J. Crowell, M. D., Charlotte.
Chas. O'H. Laughinghouse, M. D., Greenville.
E. J. Tucker, D. D. S., Roxboro.
Cyrus Thompson, M. D., Jacksonville.
F. R. Harris, M. D., Henderson.
Executive health officer:
*W. S. Rankin, M. D., secretary State board of health and State health officer, Raleigh.
Assistant to the secretary:
*Ronald B. Wilson, Raleigh.
Bureau of tuberculosis:
*L. B. McBrayer, M. D., chief of bureau and superintendent of the State sanatorium, Sanatorium.

NORTH CAROLINA—Continued.

Laboratory of hygiene:	
*C. A. Shore, M. D., director, Raleigh.	
Deputy State registrar:	
*P. M. Register, M. D., Raleigh.	
Bureau of medical inspection of schools:	
*G. M. Cooper, M. D., director, Raleigh.	
Bureau of engineering and inspection:	
*H. E. Miller, C. E., director, Raleigh.	
Bureau of maternity and infancy:	
*K. P. B. Bonner, M. D., director, Raleigh.	
Bureau of county health work:	
*K. E. Miller, M. D., director, Raleigh.	
Bureau of epidemiology:	
*J. S. Mitchener, M. D., chief, Raleigh.	
North Carolina Sanatorium:	
*L. B. McBrayer, M. D., superintendent, Sanatorium.	
Appropriations for fiscal year ending June 30, 1923:	
State board of health (executive office). \$54,500	
Vital statistics..... 20,000	
Laboratory of hygiene..... 55,000	
Tuberculosis sanatorium..... 100,000	
School inspection..... 60,000	
County health work..... 53,000	
Epidemiology..... 11,000	
Venereal disease control work..... 21,000	
Public health nursing and infant hygiene..... 6,500	
Engineering and inspection..... 49,000	
Total..... 430,000	
Other sources of revenue:	
International health board..... 10,000	
Federal government..... 35,960	
Counties, for county health work..... 134,000	
Fees paid the laboratory..... 15,000	
Publications issued by health department:	
Monthly Bulletin.	
Special Bulletins.	
Biennial Report.	

NORTH DAKOTA.

Board of health:	
Sveinbjorn Johnson, attorney general, president, Bismarck.	
W. C. Nolte, M. D., vice president, Jamestown.	
H. E. French, M. D., secretary, Grand Forks.	
Executive health officer:	
H. E. French, M. D., secretary State board of health, Grand Forks.	
Communicable diseases:	
*Robert Olesen, surgeon, U. S. P. H. S., Grand Forks.	
Appropriations for biennial period ending June 30, 1923:	
Salaries (specific)..... \$2,800	
Miscellaneous..... 4,100	
Total..... 6,900	
Publications issued by health department:	
Quarterly bulletin.	
Annual statistical data.	
Biennial report.	

OHIO.

Public health council:	
Harry H. Snively, M. D., chairman.	
G. D. Lummis, M. D.	
C. O. Probst, M. D.	
F. C. Croxton.	
R. M. Calfee.	
James E. Bauman, secretary.	
Executive health officer:	
*Harry H. Snively, M. D., director of health, Columbus.	
Assistant director of health:	
*James E. Bauman.	
Division of administration:	
*James E. Bauman, chief.	
*M. E. Hayhurst, chief clerk.	
Bureau of publicity—	
*Paul Mason, director.	
Division of communicable diseases:	
*Frank G. Boudreau, M. D., chief.	
Bureau of trachoma clinics—	
*— — —, chief.	
Bureau of local health organization—	
*— — —, chief.	
Division of sanitary engineering:	
*W. H. Dittoe, chief.	
Bureau of plumbing inspection—	
*A. A. Manchester, chief.	
Division of laboratories:	
*Fred Berry, chief.	
Division of vital statistics:	
*— — —, chief.	
Division of hygiene:	
*R. G. Leland, M. D., chief.	
Bureau of tuberculosis—	
*J. A. Frank, M. D., chief.	
Bureau of child hygiene—	
*E. J. Schwartz, M. D., chief.	
Bureau of venereal diseases—	
*P. Myers Wright, M. D., chief.	
Bureau of hospitals—	
*R. A. Brintnall, M. D., chief.	
Bureau of public health nursing—	
*Florence Farmer, R. N., chief.	
Division of industrial hygiene:	
*— — —, chief.	
Appropriations for fiscal year ending June 30, 1923:	
Personal services..... \$150,000	
Maintenance..... 97,035	
State aid for health districts..... 150,000	
Total..... 307,035	
Publication issued by health department:	
Monthly public health journal.	

OKLAHOMA.

Executive health officer:	
*A. R. Lewis, M. D., commissioner of health, Oklahoma.	
Assistant commissioner of health:	
*J. P. Folan, Oklahoma.	
Chemist:	
*W. A. Walker, Oklahoma.	

OKLAHOMA—Continued.

Bacteriologist:	
* <i>L. K. Cecil, Oklahoma.</i>	
Sanitary engineer:	
* <i>H. J. Darcey, Oklahoma.</i>	
Director of publicity:	
* <i>G. Harrison, Oklahoma.</i>	
Bureau of vital statistics:	
* <i>W. B. Dennis, chief, Oklahoma.</i>	
Appropriations for fiscal year ending June 30, 1923:	
Salaries.....	\$40,800
Biological supply.....	7,500
Traveling expenses for sanitary engineer.....	1,250
Maintenance of laboratory.....	3,750
Control of epidemics.....	5,000
Maintenance of bureau of venereal disease.....	15,000
Contingent.....	5,000
Total.....	78,300

OREGON.

Board of health:	
<i>C. J. Smith, M. D., president, Portland.</i>	
<i>J. H. Rosenberg, M. D., vice president, Prineville.</i>	
<i>Frederick D. Stricker, M. D., secretary and State health officer, Portland.</i>	
<i>W. B. Morse, M. D., Salem.</i>	
<i>Andrew C. Smith, M. D., Portland.</i>	
<i>F. M. Brooks, M. D., Portland.</i>	
<i>George E. Houck, M. D., Roseburg.</i>	
Executive health officer:	
<i>*Frederick D. Stricker, M. D., secretary and State health officer, Portland.</i>	
Register of vital statistics:	
<i>*Frederick D. Stricker, M. D., Portland.</i>	
Bacteriologist:	
<i>Wilma Hemstock, Portland.</i>	
Appropriation for fiscal year ending Dec. 31, 1922, \$25,000.	
Publications issued by health department:	
Annual report.	
Biennial report.	
Quarterly bulletin.	
Pamphlets and posters.	

PENNSYLVANIA.

Advisory board:	
<i>Charles B. Penrose, M. D., Philadelphia.</i>	
<i>Adolph Koenig, M. D., Pittsburgh.</i>	
<i>Edgar M. Green, M. D., Easton.</i>	
<i>A. A. Cairns, M. D., City Hall, Philadelphia.</i>	
<i>Lee Masterton, C. E., Johnstown.</i>	
<i>Clarence J. Marshall, V. M. D., Philadelphia.</i>	
Executive health officer:	
<i>*Edward Martin, M. D., commissioner of health, Harrisburg.</i>	
Deputy commissioner of health:	
<i>*John D. McLean, M. D., Harrisburg.</i>	
Assistant to the commissioner:	
<i>*Thomas W. Jackson, M. D., Harrisburg.</i>	
Executive secretary:	
<i>*Clinton T. Williams, Harrisburg.</i>	
Assistant to executive secretary:	
<i>*Mrs. George L. Stark, Harrisburg.</i>	

PENNSYLVANIA—Continued.

Dental division:	
<i>*C. J. Hollister, D. D. S., chief, Harrisburg.</i>	
Division of medical inspection:	
<i>*J. Moore Campbell, M. D., chief medical director, Harrisburg.</i>	
Division of school health:	
<i>*William J. Crookston, M. D., chief, Harrisburg.</i>	
Division of laboratories:	
<i>*John L. Laird, M. D., chief of laboratories, Philadelphia.</i>	
Division of sanatoria:	
<i>*Royal H. McCutcheon, M. D., medical director Pennsylvania State Sanatorium for Tuberculosis No. 1, Mont Alto.</i>	
<i>*W. G. Turnbull, M. D., medical director, Pennsylvania State Sanatorium for Tuberculosis No. 2, Cresson.</i>	
<i>*Henry A. Gorman, M. D., medical director, Pennsylvania State Sanatorium for Tuberculosis No. 3, Hamburg.</i>	
Division of tuberculosis:	
<i>*A. P. Francine, M. D., chief, Harrisburg.</i>	
Division of genito-urinary dispensaries:	
<i>*S. Leon Gans, M. D., chief, Harrisburg.</i>	
Division of supplies and biological products:	
<i>*Roy G. Miller, chief, Harrisburg.</i>	
Division of engineering:	
<i>*C. A. Emerson, Jr., chief engineer, Harrisburg.</i>	
Bureau of housing:	
<i>*John Molitor, chief, Harrisburg.</i>	
Bureau of vital statistics:	
<i>*Wilmer R. Batt, M. D., State registrar, Harrisburg.</i>	
Division of accounts:	
<i>*Margaret Maher, acting chief, Harrisburg.</i>	
Division of purchasing:	
<i>*Charles H. Clappier, Jr., chief, Harrisburg.</i>	
Division of child health:	
<i>*Mary Riggs Noble, M. D., chief, Harrisburg.</i>	
Bureau of drug control:	
<i>*Thomas S. Blair, M. D., chief, Harrisburg.</i>	
Division of public-health education:	
<i>*William C. Miller, M. D., chief, Harrisburg.</i>	
Division of nurses:	
<i>*Alice M. O'Halloran, chief, Harrisburg.</i>	
Division of newspapers:	
<i>*Lida R. Beckwith, chief, Harrisburg.</i>	
Appropriations for biennial period ending May 31, 1923:	
Tuberculosis work.....	\$2,500,000
General fund.....	1,585,000
School inspection.....	200,000
Salaries.....	985,120
Total.....	5,270,120

PHILIPPINE ISLANDS.

Council of hygiene, advisory board to the director of health:	
<i>Fernando Calderón, M. D., president, Manila.</i>	
<i>Leoncio Lopex Rizal, M. D., secretary, Manila.</i>	
<i>Gervasio Ocampo, M. D., Manila.</i>	
<i>José Albert, M. D., Manila.</i>	
<i>Benito Valdez, M. D., Manila.</i>	
<i>Luis P. Torres, LL. B., Manila.</i>	
<i>Tomas Earnshaw, Manila.</i>	

PHILIPPINE ISLANDS—Continued.

Executive health officer:

***Vicente de Jesus, M. D.**, director of health, Manila.

Assistant director of health:

***Salvador V. del Rosario, M. D.**, Manila.

Division of Provincial sanitation:

***Jacobo Fajardo, M. D.**, chief, Manila.

Division of Manila sanitation:

***Andres Catani, M. D.**, chief, Manila.

Division of Mindanao and Sulu sanitation:

***Eugenio Hernando, M. D.**, chief, Zamboanga.

Office of statistics and epidemiology:

***Manual Gomez, M. D.**, chief, Manila.

Office of health education:

***José P. Bantung, M. D.**, chief, Manila.

Office of public health nursing:

***Carmen R. Leogardo, R. N.**, chief, Manila.

Clerical office:

***Mamerto Tiano, chief, Manila.**

Office of property:

***Generoso S. Quintero, chief, Manila.**

Appropriations for fiscal year ending Dec.

31, 1922:

Salaries and wages.....	\$441,536
Miscellaneous expenses.....	730,500
Aid to specially organized Provinces.....	202,950
Total.....	<u>1,375,006</u>

Appropriation for the treatment of segregated lepers.....

100,000

Publications issued by health service:

Daily news bulletin.

Monthly bulletin.

Annual report.

Occasional pamphlets.

PORTO RICO.

Insular board of health:

***Pedro Gutierrez Igaravidez, M. D.**, president, San Juan.

***Jose Lugo Viña, M. D.**, secretary, San Juan.

W. A. Glines, M. D., San Juan.

Angel M. Pesquera, pharmacist, San Juan.

Charles Hartzel, attorney, San Juan.

Jose A. Diaz, M. D., San Juan.

Jose S. Belaval, M. D., San Juan.

G. A. Ramirez de Arellano, engineer, San Juan.

Executive health officer:

***W. F. Lippitt, M. D.**, commissioner of health, San Juan.

***Pedro Malaret, M. D.**, assistant commissioner of health, San Juan.

Division of property and accounts:

***Antonio Llabres, chief, San Juan.**

Division of sanitary engineering:

***G. A. Ramirez de Arellano, sanitary engineer, San Juan.**

Bacteriological laboratory:

***F. J. Hernández, M. D.**, director, San Juan.

Chemical laboratory:

***R. del Valle Sárraga, chemist, director, San Juan.**

Division of transmissible diseases and statistics:

***J. Gómez Brios, M. D.**, chief, San Juan.

PORTO RICO—Continued.

Appropriations for fiscal year ending

June 30, 1923:

Department of health (proper), salaries and contingent expenses.	\$169,021.60
Leper colony.....	22,293.45
Quarantine hospital.....	12,586.20
Mosquito extermination.....	30,000.00
Suppression of anemia.....	30,000.00
Emergency fund for control and suppression of epidemics (unexpended balance previous year).....	6,755.33
Trust funds for control and suppression of epidemics (fines for violation of sanitary regulations).....	1,791.63
Insular sanatorium.....	152,319.00
Care of tuberculosis patients.....	10,000.00
Education and support of poor deaf-mute children.....	1,200.00
Girls' charity school.....	70,045.85
Boys' charity school.....	100,698.85
Blind asylum.....	35,873.50
Insane asylum.....	111,266.10
Sanitation fund (trust fund).....	183,905.45
Total.....	937,876.93

Publication issued by health department:

Annual report.

RHODE ISLAND.

Board of health:

R. Morton Smith, M. D., president, Riverpoint.

Thomas J. McLaughlin, M. D., vice president, Woonsocket.

Alexander B. Briggs, M. D., Ashaway.

Norman M. MacLeod, M. D., Newport.

William F. Williams, M. D., Bristol.

Joseph M. Bennett, M. D., Providence.

M. S. Budlong, M. D., Providence.

Executive health officer:

B. U. Richards, M. D., secretary State board of health and State registrar, Statehouse, Providence.

Pathologist:

Lester A. Round, Ph. D., Providence.

Chemist:

Stephen De M. Gage, Providence.

Appropriations for fiscal year ending Dec.

31, 1922:

Executive department.....	\$18,000
Chemical laboratory.....	16,000
Pathological laboratory.....	18,000
Child-welfare division.....	15,000
Prosecuting cases of illegal medical practice.....	2,500
Total.....	69,500

Publications issued by health department:

Quarterly bulletin.

Annual report of births, deaths, and marriages.

Annual report of State board of health.

SOUTH CAROLINA.

Executive committee, board of health:

Robert Wilson, Jr., M. D., chairman, Charleston.

R. A. Marsh, M. D., Edgefield.

C. C. Gambrell, M. D., Abbeville.

SOUTH CAROLINA—Continued.

Executive committee, board of health—Con.

E. A. Hines, M. D., Seneca.
 Miles J. Walker, M. D., York.
 William Egleston, M. D., Hartsville.
 S. C. Calder, Ph. G., Greenville.
 W. M. Lester, M. D., Columbia.
 Samuel M. Wolfe, attorney general, Columbia.
 Walter E. Duncan, comptroller general, Columbia.

Executive health officer:

*James A. Hayne, M. D., State health officer, Columbia.

Department of county health units:

*L. A. Riser, M. D., Columbia.

Bureau of child hygiene and supervisor of public health nursing:

*Mrs. Ruth A. Dodd, R. N., Columbia.

Bureau of venereal diseases:

*James A. Hayne, M. D., Columbia.

Laboratory department:

*F. A. Coward, M. D., in charge, Columbia.
 *J. R. Cain, chief bacteriologist, Columbia.
 *H. M. Smith, M. D., serologist, Columbia.

Bureau of vital statistics:

*C. W. Miller, Columbia.

Bacteriologist and chemist:

F. L. Parker, Jr., M. D., Ph. D., Columbia.

South Carolina Sanatorium:

*Ernest Cooper, M. D., superintendent, Columbia.

Epidemiologist:

*A. H. Hayden, M. D., Columbia.

Sanitary engineer:

*E. L. Filby, C. E., Columbia.

State hotel inspector:

*J. H. Woodward, Columbia.

Appropriations for fiscal year ending Dec. 31, 1922:

Administrative office.....	\$47,350
Bureau of child hygiene.....	9,515
Bureau of vital statistics.....	5,750
Division of venereal disease control (exclusive of salaries for January, February, and March).....	4,340
Laboratory.....	10,730
Bureau of rural sanitation.....	15,100
Malaria cooperative work.....	11,000
Tuberculosis sanatoria.....	68,290
Hotel inspection.....	5,190
Total.....	177,265

Publications issued by health department:

Annual report.

Bulletins of various departments.

SOUTH DAKOTA.

Board of health:

J. W. Freeman, M. D., president, Lead.
 R. D. Alway, M. D., vice president, Aberdeen.
 J. Howard Smith, M. D., Huron.
 H. R. Kenaston, M. D., Bonesteel.
 Park B. Jenkins, M. D., superintendent Waubay.

Executive health officer:

Park B. Jenkins, M. D., superintendent and executive officer, Waubay.

Division of vital statistics:

Park B. Jenkins, M. D., director.

SOUTH DAKOTA—Continued.

Division of sanitary engineering:

A. H. Wieters, director.

Division of education and publicity:

M. C. Haecker, director.

Division of public health nursing:

_____ director.

Division of records and accounts:

Edna Jenkins, director.

Division of medical licensure:

H. R. Kenaston, M. D., director.

Laboratories at Vermillion:

J. C. Ohlmacher, M. D., director.

Division of preventable diseases:

_____ director.

Division of child hygiene:

Clara Edna Hayes, M. D., director.

Appropriations for fiscal year ending June 30, 1922:

Salary of superintendent.....	\$4,000
Salary of employees, administration expense, per diem, mileage, and expense of members, printing and necessary publications, division of medical licensure, division of venereal diseases, division of public health nursing.....	42,700
Total.....	46,700

Publications issued by health department:

Mothers' book.

Biennial report.

TENNESSEE.

Board of health:

W. J. Miller, M. D., president, Johnson City.
 C. B. A. Turner, M. D., vice president, Dyer.
 E. M. Sanders, M. D., Nashville.
 T. F. Peck, Nashville.

Executive health officer:

*R. Q. Lillard, M. D., secretary State board of health, Nashville.

Division of vital statistics:

*C. B. Crittenden, M. D., director, Nashville.

Division of rural sanitation:

*E. L. Bishop, M. B., director, Nashville.

Division of laboratories:

William Litterer, M. D., director, Nashville.

Division of sanitary engineering:

*C. N. Harrub, director, Nashville.

Division of venereal-disease control:

*R. Q. Lillard, M. D., acting director, Nashville.

Division of oral hygiene:

*A. G. Buckner, D. D. S., director, Nashville.

State directing nurse:

*Miss M. G. Nisbet, R. N., Nashville.

Pure food and drugs commissioner:

D. J. Frazier, Nashville.

Appropriations for biennial period ending July 1, 1923:

Administration, office, etc.....	\$20,300.00
Epidemic fund.....	5,000.00
Malaria-control fund.....	6,000.00
Trachoma-control fund.....	4,000.00
Vital statistics fund.....	21,800.00
Rural sanitation fund.....	28,000.00
Sanitary engineering fund.....	21,200.00
Laboratories fund.....	23,610.00
Venereal diseases.....	25,956.72
Total.....	155,896.72

TENNESSEE—Continued.

Other sources of revenue:

International health board, rural sanitation, \$28,000.
 International health board, malaria control, amount not definitely determined.
 American Red Cross, cooperation in nursing service.
 United States public health service, cooperation in malaria control.
 United States Government, cooperation in venereal-disease control.
 Individual counties and cities in State, cooperation in malaria control, venereal-disease control, and rural sanitation.

TEXAS.

Board of health:

J. H. Florence, M. D., president, Austin.
 Thomas B. Fisher, M. D., Dallas.
 M. M. Brown, M. D., Mexia.
 Nettie Klein, M. D., Texarkana.
 M. F. Bledsoe, M. D., Port Arthur.

Executive health officer:

*J. H. Florence, M. D., State health officer, Austin.

Assistant State health officer:

*W. H. Beazley, M. D., Austin.

Bureau of communicable diseases:

*M. P. Smartt, M. D., director, Austin.

Bureau of venereal diseases:

*J. H. Florence, M. D., acting director, Austin.

Bureau of child hygiene and public health nursing:

*H. E. Downs, M. D., director, Austin.

Bureau of sanitary engineering:

V. M. Ehlers, C. E., director, Austin.
 H. R. F. Holland, sanitary engineer, Austin.
 E. G. Eggert, assistant, Austin.

Bureau of rural sanitation:

Alex P. Harrison, M. D., director, Austin.

Bureau of food and drugs:

E. H. Golaz, chemist, director, Austin.
 L. I. Davis, assistant chemist.
 W. W. Battle, assistant chemist.

Bureau of laboratories:

G. M. Graham, M. D., director.

Bureau of vital statistics:

*J. C. Twitchell, M. D., director.

Appropriations for fiscal year ending Aug.

31, 1923:	
General.....	\$91,700
Bureau of vital statistics.....	9,700

Total..... 101,400

Publications issued by health department:

Biennial report.

Quarterly health magazine.

Pamphlets, leaflets, and placards.

UTAH.

Board of health:

Fred Stauffer, M. D., president, Salt Lake City.
 T. B. Beatty, M. D., secretary, Salt Lake City.
 Joseph R. Morrell, M. D., Ogden.
 Clarence Snow, M. D., Salt Lake City.
 L. J. Muir, Bountiful.
 S. S. Burnham, D. D. S., Salt Lake City.
 Charles J. Ullrich, C. E., Salt Lake City.

UTAH—Continued.

Executive health officer:

*T. B. Beatty, M. D., State health commissioner, Salt Lake City.

Appropriations for biennial period ending

Mar. 31, 1923:

Salaries.....	\$15,000
Contingent account.....	10,500
Vital statistics account.....	3,000
Venereal disease control work.....	3,600

Total..... 32,100

Publications issued by health department:

Quarterly bulletin.

Biennial report.

Fiscal year ends Dec. 31.

VERMONT.

Board of health:

F. Thomas Kidder, M. D., president, Woodstock.

William T. Slayton, M. D., Morrisville.

Charles F. Dalton, M. D., secretary, Burlington.

Executive health officer:

*Charles F. Dalton, M. D., secretary State board of health, Burlington.

Laboratory of hygiene:

*Charles F. Whitney, M. D., director, Burlington.

Sanitary engineer:

J. W. Votey, C. E., Burlington.

Sanitary inspector:

*Henri L. Pache, M. D., Burlington.

Division of venereal diseases:

*Henri L. Pache, M. D., Burlington.

Division of tuberculosis:

*H. W. Slocum, Burlington.

Division of poliomyelitis:

*W. L. Aycock, M. D., research, Burlington.

*Bertha E. Weisbrod, R. N., after-care, Burlington.

Division of public health nursing:

*_____, Burlington.

Appropriations for fiscal year ending June 30, 1923:

Total budget, \$85,000.

Other source of revenue:

Private donations for study and treatment of infantile paralysis.

Publications issued by health department:

Quarterly bulletin.

Biennial report.

VIRGINIA.

Board of health:

W. M. Smith, M. D., president, Alexandria.

J. B. Fisher, M. D., secretary, Midlothian.

J. T. Wilson, Richmond.

McG. Newton, M. D., Richmond.

Mrs. Chas. Hall Davis, Petersburg.

John T. Daniel, Cape Charles.

Isaac Pearce, M. D., Tazewell.

W. F. Drewry, M. D., Petersburg.

E. Howe Miller, M. D., Danville.

H. T. Marshall, M. D., University of Virginia.

Guy R. Harrison, D. D. S., Richmond.

Hugh J. Hagan, M. D., Roanoke.

S. A. Sutton, M. D., Norfolk.

G. L. Morris, M. D., Buckingham.

VIRGINIA—Continued.

Executive health officer:
 *Eanion G. Williams, M. D., State health commissioner, Richmond.

Assistant health commissioner:
 *Roy K. Flanagan, M. D., Richmond.

Registrar of vital statistics:
 *W. A. Plecker, M. D., Richmond.

Bacteriologist:
 *A. H. Straus, Richmond.

Sanitary engineer:
 *Richard Messer, C. E., Richmond.

Bureau of child welfare:
 *Mary E. Brydon, M. D., director.

Public health nursing:
 *F. B. Croxton, R. N., acting director.

Appropriations for fiscal year ending Feb. 28, 1923:

Administration.....	\$24,464
Sanitary engineering.....	15,450
Publicity.....	5,400
Rural sanitation.....	25,000
Malaria.....	5,000
Inspection of convict camps.....	750
Laboratory.....	15,000
Child welfare and public health nursing.....	38,020
Venereal diseases.....	10,000
Control of epidemics.....	5,000
Vital statistics.....	19,935
For collection and publication of marriage and divorce statistics.....	2,855
Prevention of blindness.....	2,300
 Total.....	160,174

Publications issued by health department:
 Monthly bulletin.
 Annual report.

WASHINGTON.

Board of health:
 Paul A. Turner, M. D., director of health, chairman.
 W. W. Brand, M. D.
 James H. Egan, M. D.
 R. E. Elvins, M. D.
 Herbert C. Lieser, M. D.
 C. E. Dorisy, C. E., secretary, Seattle.

Executive health officer:
 *Paul A. Turner, M. D., director of health, Seattle.

Epidemiologist:
 *A. U. Simpson, M. D., Seattle.

Chief of laboratory:
 *A. U. Simpson, M. D., Seattle.

Sanitary engineer:
 *C. E. Dorisy, C. E., Seattle.

Registrar:
 *C. E. Dorisy, C. E., Seattle.

Appropriations for biennial period ending Mar. 31, 1923:

Salary of director.....	\$10,000
Salaries and wages.....	48,000
Supplies, material, and service.....	28,230
 Total.....	86,230

WEST VIRGINIA.

Public health council:
 J. L. Pyle, M. D., president, Chester.
 W. T. Henshaw, M. D., commissioner of health, Charleston.
 H. G. Camper, M. D., Welch.
 B. F. Shuttleworth, M. D., Clarksburg.
 W. M. Babb, M. D., Keyser.
 V. T. Churchman, M. D., Charleston.
 Thos. L. Harris, Parkersburg.

Executive health officer:
 *W. T. Henshaw, M. D., commissioner of health, Charleston.

Division of sanitary engineering:
 *Ellis S. Tisdale, director, Charleston.
 *R. C. Beckett, Charleston.
 *Chas. H. Young, Charleston.

Division of vital statistics:
 *Carl F. Raver, M. D., M. P. H., Charleston.

Division of child welfare and public health nursing:
 *Jean T. Dillon, R. N., director, Charleston.
 *Edna M. Hardsaw, R. N., field supervisor.
 *Gertrude H. Wuesthoff, R. N., field supervisor.

Hygienic laboratory:
 *Chas. E. Gabel, Ph. D., Charleston.
 *Lucy F. Gabel, chemist, Charleston.
 *Ruth Hinterleitner, assistant bacteriologist, Charleston.

Bureau of venereal diseases:
 *W. S. Robertson, M. D., director, Charleston.

Bureau of rural sanitation:
 *M. V. Ziegler, passed asst. surg., U. S. P. H. S., director, Charleston.

Appropriations for fiscal year ending June 30, 1923:

For general use.....	\$60,000
Salary of commissioner.....	4,800
Bureau of venereal diseases.....	10,000
 Total.....	74,800

Other sources of revenue:
 Fees for granting certificates to practice medicine.
 Fees from laboratory work for private individuals.

Publications issued by health department:
 Quarterly bulletin.
 Annual report.

WISCONSIN.

Board of health:
 Wm. F. Whyte, M. D., president, Madison.
 I. D. Steffen, M. D., Antigo.
 E. S. Hayes, M. D., Eau Claire.
 G. Windesheim, M. D., Kenosha.
 C. A. Richards, M. D., Rhinelander.
 Otho Fiedler, M. D., Sheboygan.
 C. A. Harper, M. D., State health officer, Madison.
 *L. W. Hutchcroft, assistant State health officer, Madison.

Executive health officer:
 *C. A. Harper, M. D., State health officer, Madison.

Bureau of vital statistics:
 *C. A. Harper, M. D., State registrar, Madison.

WISCONSIN—Continued.

Bureau of communicable diseases:	
*H. M. Guilford, M. D., director, Madison.	
Bureau of sanitary engineering:	
*C. M. Baker, State sanitary engineer, Madison.	
*E. J. Tully, chemical engineer, Madison.	
Bureau of education:	
*L. W. Bridgman, acting director, Madison.	
Bureau of child welfare and public health nursing:	
*Mrs. Mary P. Morgan, director, Madison.	
Bureau of nursing education:	
*Adda Eldredge, R. N., director, Madison.	
Bureau of plumbing and domestic sanitary engineering:	
*Frank R. King, State domestic sanitary engineer, Madison.	
Bureau of social hygiene:	
*H. M. Guilford, M. D., director, Madison.	
Laboratory service:	
*W. D. Stovall, M. D., director State laboratories, Madison.	
*M. S. Nichols, chemist State laboratory, Madison.	
*Katherine Wattawa, director branch laboratory, Rhinelander.	
*Gladys Hadley, director cooperative laboratory, Superior.	
*Clarissa McFetridge, director cooperative laboratory, Oshkosh.	
*Henry Miller, director cooperative laboratory, Kenosha.	
*C. D. Partridge, M. D., director cooperative laboratory, Wausau.	
*Lydia Lacey, director, cooperative laboratory, Green Bay.	
*Marion Anderson, director, cooperative laboratory, Beloit.	
Appropriations for fiscal year ending June 30, 1923:	
General administration.....	\$51,000
Emergency appropriation for epidemics.....	7,500

WISCONSIN—Continued.

Appropriations for fiscal year ending June 30, 1923—Continued.	
Branch laboratory and State cooperative laboratories.....	\$7,950
Prevention of infantile blindness.....	1,500
Venereal disease control work.....	41,250
Bureau of sanitary engineering.....	10,000
Bureau of communicable diseases.....	13,300
Bureau of child welfare and public health nursing.....	21,100
Comfort station supervision.....	5,000
Licensing of embalmers, hotels and restaurants, plumbers, and barbers.....	38,000
Total.....	196,600

Publications issued by health department:
Quarterly bulletin.
Biennial report.

WYOMING.

Board of health:	
Fred A. Hodson, M. D., president, Sheridan.	
G. A. Fox, M. D., vice president, Cheyenne.	
Albert B. Tonkin, M. D., secretary and executive officer, Cheyenne.	
Edw. S. Lauzer, M. D., Rock Springs.	
J. D. Lewellen, M. D., Powell.	
Executive health officer:	
*Albert B. Tonkin, M. D., State health officer, Cheyenne.	

Venereal disease control:

Appropriations for biennial period ending Mar. 31, 1923:	
State board of health.....	\$19,000
Salary of secretary.....	8,000
Salary of venereal disease officer.....	6,000
Total.....	33,000

Publications issued by health department:
Biennial report.
Bimonthly bulletin.

DEATHS DURING WEEK ENDED JULY 22, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended July 22, 1922, and corresponding week, 1921. (From the Weekly Health Index, July 25, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended July 22, 1922.	Corresponding week, 1921.
Policies in force.....	50,271,674	47,346,954
Number of death claims.....	8,255	7,442
Death claims per 1,000 policies in force, annual rate.....	8.6	8.2

Deaths from all causes in certain large cities of the United States during the week ended July 22, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, July 25, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922	Week ended July 22, 1922.		Annual death rate per 1,000, corresponding week 1922.	Deaths under 1 year.		Infant mortality rate, week ended July 22, 1922. ²
		Total deaths.	Death rate. ¹		Week ended July 22, 1922.	Corresponding week 1921.	
Total.....	27,755,221	5,459	10.3	10.2	838	886
Akron, Ohio.		208,435	18	4.5	7.1	1	2 11
Albany, N. Y.	116,233	23	11.7	13.1	3	3 67	
Atlanta, Ga.	220,947	51	12.1	10.6	8	8	
Baltimore, Md.	762,222	173	12.0	10.6	40	40 113	
Birmingham, Ala.	191,017	45	12.3	14.0	7	11	
Boston, Mass.	764,017	174	11.9	11.4	29	28 78	
Bridgeport, Conn.	143,555	20	7.3	7.6	4	4 50	
Buffalo, N. Y.	528,163	103	10.5	9.1	15	15 59	
Cambridge, Mass.	110,944	17	8.0	7.6	4	5 73	
Camden, N. J.	121,915	31	13.3	7.8	4	3 61	
Chicago, Ill.	2,833,288	501	9.2	10.1	85	96	
Cincinnati, Ohio.	404,855	76	9.8	15.1	10	15 67	
Cleveland, Ohio.	854,003	133	8.1	9.7	18	31 46	
Columbus, Ohio.	233,455	52	10.7	14.7	9	11 95	
Dallas, Tex.	171,974	37	11.2	12.9	8	4	
Dayton, Ohio.	161,824	30	9.7	6.9	4	4 68	
Denver, Colo.	267,591	68	13.3	11.7	6	3	
Detroit, Mich.	993,678	181	9.5	8.1	39	34 75	
Fall River, Mass.	120,700	26	11.2	10.4	7	6 98	
Fort Worth, Tex.	114,717	29	13.2	9			
Grand Rapids, Mich.	143,572	27	9.8	7.4	3	3 50	
Houston, Tex.	150,087	35	12.2	11.2	7	4	
Indianapolis, Ind.	333,257	72	11.3	13.1	10	14 76	
Jersey City, N. J.	305,911	62	10.6	10.7	13	20 83	
Kansas City, Kans.	113,801	25	11.5	12.0	4	6 92	
Kansas City, Mo.	343,988	59	8.9	12.4	9	10	
Los Angeles, Calif.	634,866	148	12.2	14.0	20	14 83	
Louisville, Ky.	236,877	60	13.2	14.8	7	10 76	
Lowell, Mass.	114,423	27	12.3	13.8	4	8 67	
Memphis, Tenn.	167,862	80	24.9	15.7	14	3	
Milwaukee, Wis.	476,603	66	7.2	7.8	6	20 29	
Minneapolis, Minn.	400,970	69	9.0	7.8	6	5 33	
Nashville, Tenn.	122,832	35	14.9	15.4	3	4	
New Bedford, Mass.	127,542	12	4.9	8.3	1	7 15	
New Haven, Conn.	169,987	33	10.1	11.6	5	2 61	
New Orleans, La.	399,616	115	15.0	11.4	19	9	
New York, N. Y.	5,839,746	1,055	9.4	8.9	143	181 55	
Newark, N. J.	431,702	77	9.3	9.5	19	11 84	
Norfolk, Va.	124,915	29	12.1	12.5	5	3 89	
Oakland, Calif.	233,279	37	8.3	6.2	3	2 38	
Omaha, Nebr.	200,739	39	10.1	11.1	3	4 32	
Paterson, N. J.	138,521	25	9.4	11.4	8	2 123	
Philadelphia, Pa.	1,894,500	392	10.8	9.7	63	62 75	
Pittsburgh, Pa.	607,902	139	11.9	10.5	22	35 70	
Portland, Oreg.	269,240	51	9.9	10.0	6	4 59	
Providence, R. I.	241,011	51	11.0	11.8	8	20 63	
Richmond, Va.	178,385	60	17.5	14.5	14	15 170	
Rochester, N. Y.	311,548	60	10.0	9.2	9	12 69	
St. Louis, Mo.	705,008	147	9.6	11.9	13	11	
St. Paul, Minn.	239,836	41	8.9	7.7	3	7 28	
Salt Lake City, Utah.	123,918	27	11.4	17.6	2	6 30	
San Antonio, Tex.	178,056	48	14.1	12			
San Francisco, Calif.	529,792	103	10.1	12.4	5	4 29	
Seattle, Wash.	315,312	46	7.6	6.2	3	4 25	
Springfield, Mass.	140,052	19	7.1	7.7	4	6 60	
Toledo, Ohio.	260,717	42	8.4	9.0	12	3 117	
Trenton, N. J.	125,075	32	13.3	6.8	4	2 61	
Washington, D. C.	437,571	106	12.6	12.1	16	12 92	
Wilmington, Del.	115,568	26	11.7	12.0	6	2 117	
Worcester, Mass.	188,449	39	10.8	9.0	3	7 33	
Yonkers, N. Y.	165,422	23	11.4	5.6	6	2 125	
Youngstown, Ohio.	144,970	24	8.6	9.0	5	7 66	

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1921. Cities left blank are not in the registration area for births.

* Enumerated population Jan. 1, 1920.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT STATE SUMMARIES.

Telegraphic Reports for Week Ended July 29, 1922.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

ALABAMA.		COLORADO.	
	Cases.	(Exclusive of Denver.)	Cases.
Diphtheria.....	34	Cerebrospinal meningitis.....	1
Hookworm disease.....	74	Chicken pox.....	5
Malaria.....	36	Diphtheria.....	16
Paratyphoid fever.....	2	Measles.....	1
Pellagra.....	10	Mumps.....	2
Scarlet fever.....	11	Pneumonia.....	1
Smallpox.....	3	Scarlet fever.....	13
Tuberculosis.....	8	Septic sore throat.....	1
Typhoid fever.....	55	Tuberculosis.....	82
Whooping cough.....	6	Typhoid fever.....	20
ARKANSAS.		Whooping cough.....	
Chicken pox.....	3	2	
Hookworm disease.....	1	CONNECTICUT.	
Influenza.....	4	Chicken pox.....	5
Malaria.....	200	Conjunctivitis (infectious).....	1
Pellagra.....	9	Diphtheria.....	27
Scarlet fever.....	7	Lethargic encephalitis.....	1
Smallpox.....	1	Measles:	
Trachoma.....	1	New Haven.....	17
Tuberculosis.....	18	Scattering.....	54
Typhoid fever.....	22	Mumps.....	4
Whooping cough.....	14	Pneumonia (lobar).....	5
CALIFORNIA.		Scarlet fever.....	15
Cerebrospinal meningitis:		Septic sore throat.....	1
San Francisco.....	1	Smallpox.....	1
San Joaquin County.....	1	Tetanus.....	5
Diphtheria.....	106	Trachoma.....	1
Influenza.....	4	Tuberculosis (all forms).....	30
Lethargic encephalitis:		Typhoid fever.....	21
Fresno County.....	1	Whooping cough.....	62
Los Angeles.....	1	DELAWARE.	
Measles.....	4	Chicken pox.....	2
Poliomyelitis—San Joaquin County.....	1	Diphtheria.....	2
Rabies in man—Venice.....	1	Measles.....	1
Scarlet fever.....	35	Pneumonia.....	1
Smallpox.....	12	Scarlet fever.....	1
Typhoid fever.....	24	Tuberculosis.....	7
		Typhoid fever.....	8

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FLORIDA.		Cases.	KANSAS—continued.		Cases.
Cerebrospinal meningitis.		1	Measles.		5
Dengue.	179		Mumps.		6
Diphtheria.	11		Pneumonia.		2
Influenza.	23		Scarlet fever.		34
Malaria.	34		Smallpox.		3
Ophthalmia neonatorum.	1		Tetanus.		2
Pneumonia.	1		Tuberculosis.		28
Scarlet fever.	2		Typhoid fever.		32
Smallpox.	5		Whooping cough.		60
Typhoid fever.	13		LOUISIANA.		
GEORGIA.			Diphtheria.		12
Chicken pox.	2		Malaria.		53
Diphtheria.	18		Pellagra.		7
Dysentery (bacillary).	1		Poliomyelitis.		1
Hookworm disease.	14		Scarlet fever.		4
Influenza.	15		Typhoid fever.		20
Malaria.	81		MARYLAND.		
Mumps.	1		Cerebrospinal meningitis.		2
Pneumonia.	7		Chicken pox.		5
Poliomyelitis.	2		Diphtheria.		26
Scarlet fever.	10		Dysentery.		13
Septic sore throat.	7		Influenza.		1
Smallpox.	1		Lethargic encephalitis.		1
Tuberculosis (pulmonary).	9		Malaria.		11
Typhoid fever.	48		Measles.		46
Typhus fever.	1		Mumps.		18
Whooping cough.	3		Ophthalmia neonatorum.		3
ILLINOIS.			Paratyphoid fever.		5
Diphtheria:			Pneumonia (all forms).		17
Cook County (including Chicago).		88	Scarlet fever.		10
Chicago.		80	Tuberculosis.		75
Scattering.		26	Typhoid fever.		42
Influenza.		29	Whooping cough.		56
Pneumonia.		124	MASSACHUSETTS.		
Poliomyelitis:			Cerebrospinal meningitis.		5
Chicago.		5	Chicken pox.		14
Franklin County.		1	Conjunctivitis (suppurative).		2
Scarlet fever:			Diphtheria.		72
Cook County (including Chicago).		31	German measles.		5
Chicago.		30	Measles.		144
Scattering.		23	Mumps.		38
Smallpox.		17	Ophthalmia neonatorum.		9
Typhoid fever.		59	Pneumonia (lobar).		22
Whooping cough.		283	Poliomyelitis.		8
INDIANA.			Scarlet fever.		49
Cerebrospinal meningitis:			Septic sore throat.		2
De Kalb County.		1	Trachoma.		3
Ripley County.		1	Tuberculosis (all forms).		151
Diphtheria.		24	Typhoid fever.		20
Scarlet fever.		13	Whooping cough.		97
Smallpox.		8	MINNESOTA.		
Typhoid fever.		16	Chicken pox.		9
IOWA.			Diphtheria.		44
Diphtheria.		15	Measles.		22
Scarlet fever.		13	Pneumonia.		1
KANSAS.			Scarlet fever.		56
Cerebrospinal meningitis.		1	Smallpox.		15
Chicken pox.		7	Trachoma.		4
Diphtheria.		20	Tuberculosis.		93
Leprosy.		1	Typhoid fever.		22
Malaria.		4	Whooping cough.		2

¹ Week ended Friday.

MISSISSIPPI.		Cases.	NORTH CAROLINA.		Cases.
Diphtheria.....	26		Cerebrospinal meningitis.....	1	1
Scarlet fever.....	3		Chicken pox.....	5	5
Typhoid fever.....	27		Diphtheria.....	121	121
MONTANA.			German measles.....	3	3
Diphtheria.....	3		Measles.....	16	16
Poliomyelitis.....	2		Poliomyelitis.....	1	1
Rocky Mountain spotted or tick fever:			Scarlet fever.....	40	40
Hysham.....	1		Septic sore throat.....	3	3
Scarlet fever.....	6		Smallpox.....	3	3
Smallpox.....	2		Typhoid fever.....	122	122
Typhoid fever.....	3		Whooping cough.....	110	110
NEBRASKA.			OREGON.		
Chicken pox.....	4		Chicken pox.....	8	8
Diphtheria.....	9		Diphtheria.....	12	12
German measles.....	1		Measles.....	1	1
Measles.....	5		Mumps.....	2	2
Mumps.....	1		Pneumonia.....	11	11
Scarlet fever.....	9		Scarlet fever.....	1	1
Smallpox.....	1		Smallpox:		
Tuberculosis.....	4		Portland.....	9	9
Typhoid fever.....	3		Scattering.....	3	3
Whooping cough.....	7		Typhoid fever.....	1	1
NEW JERSEY.			Whooping cough.....	10	10
Cerebrospinal meningitis.....	2		SOUTH DAKOTA.		
Chicken pox.....	10		Scarlet fever.....	13	13
Diphtheria.....	86		Smallpox.....	1	1
Dysentery.....	3		Tuberculosis.....	4	4
Influenza.....	7		Typhoid fever.....	5	5
Malaria.....	5		Whooping cough.....	3	3
Measles.....	120		TEXAS.		
Ophthalmia neonatorum.....	3		Diphtheria.....	19	19
Pneumonia.....	36		Pellagra.....	5	5
Poliomyelitis.....	6		Pneumonia.....	2	2
Scarlet fever.....	34		Scarlet fever.....	7	7
Typhoid fever.....	16		Smallpox.....	19	19
Whooping cough.....	103		Typhoid fever.....	16	16
NEW MEXICO.			VERMONT.		
Conjunctivitis.....	1		Chicken pox.....	12	12
Diphtheria.....	21		Diphtheria.....	6	6
Scarlet fever.....	1		Measles.....	17	17
Tuberculosis.....	29		Mumps.....	7	7
Typhoid fever.....	7		Scarlet fever.....	5	5
Whooping cough.....	2		Typhoid fever.....	1	1
NEW YORK.			Whooping cough.....	25	25
(Exclusive of New York City.)			VIRGINIA.		
Diphtheria.....	85		Poliomyelitis—Amherst County.....	1	1
Influenza.....	5		WASHINGTON.		
Lethargic encephalitis.....	2		Cerebrospinal meningitis—Aberdeen.....	1	1
Measles.....	211		Chicken pox.....	10	10
Pneumonia.....	64		Diphtheria.....	13	13
Poliomyelitis.....	4		Measles.....	2	2
Scarlet fever.....	80		Mumps.....	11	11
Smallpox.....	1		Scarlet fever.....	10	10
Tetanus.....	4		Smallpox.....	10	10
Typhoid fever.....	35		Tuberculosis.....	3	3
Whooping cough.....	142		Typhoid fever.....	6	6
			Whooping cough.....	25	25

¹ Death.

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WEST VIRGINIA.	Cases.	WISCONSIN—continued.	Cases.
Diphtheria.....	8	Scattering—Continued.	
Scarlet fever.....	5	Influenza.....	8
Tuberculosis.....	4	Measles.....	54
Typhoid fever.....	8	Pneumonia.....	2
Whooping cough.....	6	Poliomyelitis.....	1
		Scarlet fever.....	24
WISCONSIN.		Smallpox.....	25
Milwaukee:		Tuberculosis.....	27
Chicken pox.....	19	Typhoid fever.....	10
Diphtheria.....	8	Whooping cough.....	153
Influenza.....	1		
Measles.....	29	WYOMING.	
Poliomyelitis.....	1	Chicken pox.....	2
Scarlet fever.....	5	Diphtheria.....	1
Whooping cough.....	152	Hookworm disease.....	1
Scattering:		Influenza.....	1
Chicken pox.....	20	Smallpox.....	5
Diphtheria.....	22	Typhoid fever.....	4
German measles.....	1	Whooping cough.....	7

Delayed Reports for Week Ended July 22, 1922.

DISTRICT OF COLUMBIA.	Cases.	KENTUCKY.	Cases.
Chicken pox.....	1	Cerebrospinal meningitis:	
Diphtheria.....	12	Jefferson County.....	1
Measles.....	14	Diphtheria.....	8
Pellagra.....	1	Dysentery.....	3
Scarlet fever.....	1	Malaria.....	1
Tuberculosis.....	33	Measles.....	25
Typhoid fever.....	5	Pellagra.....	2
Whooping cough.....	3	Pneumonia.....	2
		Scarlet fever.....	3
ILLINOIS.		Smallpox.....	5
Cerebrospinal meningitis—Chicago.....	2	Trachoma.....	11
Diphtheria:		Tuberculosis:	
Cook County (including Chicago).....	100	Jefferson County.....	15
Chicago.....	79	Scattering.....	5
Kane County.....	8	Typhoid fever.....	49
Scattering.....	38	Whooping cough.....	8
Pneumonia.....	86		
Poliomyelitis—Hardin County.....	1	MAINE.	
Scarlet fever:		Chicken pox.....	18
Cook County (including Chicago).....	40	Diphtheria.....	9
Chicago.....	31	Measles.....	12
Scattering.....	30	Paratyphoid fever.....	1
Smallpox.....	89	Pneumonia.....	3
Typhoid fever.....	37	Poliomyelitis.....	2
Whooping cough.....	325	Scarlet fever.....	5
		Tuberculosis.....	10
		Typhoid fever.....	8
		Whooping cough.....	2

1911

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SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
1922.										
Alabama (June).	48	18	127	32	53	3	23	35	169	
California (June).	9	628	29	7	144	3	8	338	171	96
Delaware (May).	2	3	1	1	11			90		12
Delaware (June).		5		5	14			69		10
Hawaii (June).	4	18	11		78			1		11
Illinois (June).	15	804	42	54	2,762	7	8	467	112	111
Iowa (June).	2	63			19			85	44	2
Kansas (June).	109	2		5	44	1	1	118	45	51
Maine (June).		26	2		44			76		4
Mississippi (June).		60	198	10,745	22	1,329	3	20	17	337
Montana (May).	3	28			2		1	25	47	4
Montana (June).	1	18			2			18	25	15
New Jersey (June).	11	385	15	11	2,883		3	517		50
North Carolina (June).	4	124			152		3	76	106	295
North Dakota (June).		16	1		2			20	25	3
Ohio (June).	7	436	11		3,723		4	452	160	119
Oklahoma (June).		12			4	6		6	13	35
Oregon (June).		54			6			31	59	10
South Carolina (June).	2	110		5	1	3	2	3	14	96
South Dakota (June).	2	21			14		1	18	39	8
Virginia (June).	5	92	252	327	497	35	9	63	21	207
Washington (June).	1	64			135		1	52	66	56
Wyoming (May).		8	22		3			4	19	7
Wyoming (June).		4						4	12	8

SMALLPOX.

Nogales, Ariz.

On July 26, 1922, one case of smallpox was reported at Nogales, Ariz. An outbreak of smallpox in Nogales, Mexico, was also reported, with the occurrence of 22 cases.

CITY REPORTS FOR WEEK ENDED JULY 15, 1922.

ANTHRAX.

City.	Cases.	Deaths.
Illinois:		
Alton.	1	
Michigan:		
Detroit.	1	

CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended July 15, 1922.		City.	Median for pre- vious years.	Week ended July 15, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				New York:			
San Francisco.....	0		2	Lackawanna.....	0		1
Santa Barbara.....	0		1	New York.....	5	2	3
Illinois:				North Carolina:			
Chicago.....	2	4	.....	Salisbury.....			1
Iowa:				Pennsylvania:			
Waterloo.....		1	1	Braddock.....	0	1	.....
Michigan:				Philadelphia.....	1	1	.....
Detroit.....	0		1	Pittsburgh.....	0	1	.....
Minnesota:				Texas:			
Duluth.....	0	1	1	Waco.....	0		1
New Jersey:				Wisconsin:			
Bayonne.....	0	1	.....	Milwaukee.....	1	1	.....
Jersey City.....	0	1	.....			

DIPHTHERIA.

See p. 1917; also Telegraphic weekly reports from States, p. 1907, and Monthly summaries by States, p. 1911.

INFLUENZA.

City.	Cases.		Deaths, week ended July 15, 1922.	City.	Cases.		Deaths, week ended July 15, 1922.
	Week ended July 16, 1921.	Week ended July 15, 1922.			Week ended July 16, 1921.	Week ended July 15, 1922.	
California:				New York:			
Los Angeles.....	2	2	2	New York.....	4	7	2
San Francisco.....		1	.....	North Tonawanda.....	1		.....
Florida:				Ohio:			
Tampa.....		1	.....	Cleveland.....	1		.....
Illinois:				Pennsylvania:			
Chicago.....	1	1	1	Philadelphia.....	1		1
Maryland:				Rhode Island:			
Baltimore.....	1			Providence.....		1	.....
Michigan:				Tennessee:			
Detroit.....	1			Nashville.....			1
Missouri:				Texas:			
Kansas City.....		1	1	El Paso.....			1
New Jersey:				Wisconsin:			
Newark.....		1	.....	Oshkosh.....	1		.....

LEPROSY.

City.	Cases.	Deaths.
California: San Francisco.....		1

LETHARGIC ENCEPHALITIS.

California: San Francisco.....	3
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CITY REPORTS FOR WEEK ENDED JULY 15, 1922--Continued.

MALARIA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Massachusetts:		
Montgomery.....	1	2	Boston.....	1	
Arkansas:			Haverhill.....	1	
Little Rock.....	9		Michigan:		
North Little Rock.....	1		Ironwood.....	1	
California:			New Jersey:		
Los Angeles.....	1		Newark.....	3	
San Francisco.....	1		New York:		
Florida:			New York.....	3	
Tampa.....	6		Ohio:		
Georgia:			Cleveland.....	2	
Albany.....	2		Tennessee:		
Augusta.....	1		Memphis.....	18	2
Rome.....	1		Texas:		
Savannah.....	2		Dallas.....	1	
Illinois:			Houston.....		1
Chicago.....	1		Waco.....		1
Louisiana:			Virginia:		
New Orleans.....	1		Portsmouth.....		1
Maryland:					
Baltimore.....	1				

MEASLES.

See p. 1917; also Telegraphic weekly reports from States, p. 1907, and Monthly summaries, by States, p. 1911.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
District of Columbia:			Massachusetts:		
Washington.....		1	Northampton.....	1	
Florida:			South Carolina:		
Tampa.....		1	Greenville.....		1
Georgia:			Tennessee:		
Atlanta.....	3		Nashville.....	1	1
Augusta.....	1	1	Texas:		
Louisiana:			Dallas.....	1	2
New Orleans.....	1				

PNEUMONIA (ALL FORMS).

Alabama:			Georgia:		
Birmingham.....	8		Atlanta.....	4	3
Montgomery.....	7		Augusta.....		2
California:			Macon.....	6	
Long Beach.....	1		Savannah.....		2
Los Angeles.....	28	10	Illinois:		
Oakland.....	5	3	Alton.....		1
Pasadena.....		1	Champaign.....	1	
Riverside.....		1	Chicago.....	80	23
Sacramento.....		1	Freeport.....	2	
San Diego.....		1	Kewanee.....	1	
San Francisco.....	7		La Salle.....		1
Stockton.....		2	Mattoon.....		1
Colorado:			Oak Park.....		1
Denver.....	2		Rock Island.....		1
Pueblo.....	1		Rockford.....		1
Connecticut:			Indiana:		
Bridgeport.....	1		Fort Wayne.....		1
Hartford.....		1	Indianapolis.....		5
Milford.....		1	Kansas:		
New Haven.....		3	Lawrence.....		1
New London.....	1		Kentucky:		
Delaware:			Covington.....		1
Wilmington.....	2		Louisville.....		2
District of Columbia:			Louisiana:		
Washington.....	6		New Orleans.....	8	5
Florida:			Maine:		
Tampa.....		1	Lewiston.....		1
			Portland.....		2

August 4, 1922.

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Maryland:			New York:		
Baltimore.....	12	7	Albany.....	5	—
Cumberland.....		1	Buffalo.....	11	3
Massachusetts:			Cortland.....	3	1
Boston.....		13	Geneva.....		1
Brainerd.....	1		Jamestown.....	1	—
Cambridge.....		1	Lackawanna.....	1	—
Chicopee.....		1	Mount Vernon.....	2	1
Danvers.....		1	New York.....	107	59
Fall River.....		4	Niagara Falls.....	1	—
Haverhill.....	2		Ogdensburg.....		1
Lawrence.....		2	Rochester.....	4	3
Leominster.....		1	Schenectady.....	1	—
Lowell.....	1		Troy.....		2
Lynn.....		1	Watertown.....		1
Malden.....	2		White Plains.....		1
Medford.....		1	North Carolina:		
Brookline.....	1		Winston-Salem.....		1
New Bedford.....		1	Ohio:		
Salem.....	2		Cincinnati.....		3
Somerville.....	1		Cleveland.....	12	6
Waltham.....	1		Columbus.....		1
West Springfield.....		1	Dayton.....	1	—
Michigan:			East Cleveland.....		1
Detroit.....	11	9	East Youngstown.....		1
Grand Rapids.....	4		Toledo.....		3
Hamtramck.....	3	1	Youngstown.....		1
Pontiac.....		1	Oklahoma:		
Port Huron.....	1		Oklahoma.....		1
Minnesota:			Oregon:		
Faribault.....		1	Portland.....		3
Minneapolis.....		5	Pennsylvania:		
St. Paul.....	6		Philadelphia.....	25	19
Missouri:			Rhode Island:		
Kansas City.....		4	Providence.....		5
Montana:			South Carolina:		
Billings.....		1	Charleston.....		2
Butte.....		2	Tennessee:		
Great Falls.....		1	Memphis.....		1
Nebraska:			Nashville.....	1	—
Lincoln.....		1	Texas:		
Omaha.....		4	Dallas.....		2
New Jersey:			El Paso.....		4
Clifton.....	1		Houston.....		2
East Orange.....	5	1	Utah:		
Garfield.....	1		Salt Lake City.....		3
Hoboken.....		1	Virginia:		
Jersey City.....		3	Portsmouth.....		1
Kearny.....	1		Richmond.....		2
Newark.....	12	3	West Virginia:		
Perth Amboy.....		1	Charleston.....		1
Plainfield.....		1	Clarksburg.....		2
Trenton.....	2		Wheeling.....		1
West Orange.....	1		Wisconsin:		
			Kenosha.....		1

CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

POLIOMYÉLITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended July 15, 1922.		City.	Median for pre- vious years.	Week ended July 15, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Michigan:			
Mobile.....	0	2	.....	Detroit.....	1	1	.....
California:				New Jersey:			
Los Angeles.....	0	1	.....	Atlantic City.....	0	1	.....
Stockton.....	0	1	.....	Hoboken.....	0	1	.....
Illinois:				Newark.....	1	1	.....
Chicago.....	2	1	1	New York:			
Maine:				Albany.....	0	1	.....
Bangor.....	0	1	.....	New York.....	4	1	.....
Maryland:				Rhode Island:			
Baltimore.....	1	2	1	Cranston.....	0	1	.....
Massachusetts:				Providence.....	0	4	1
Melrose.....	0	1	.....			
New Bedford.....	0	4	1				

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:			
Los Angeles.....	5	Kentucky:	
Georgia:		Louisville.....	1
Savannah.....	1	Missouri:	
		Kansas City.....	2

SCARLET FEVER.

See p. 1917; also Telegraphic weekly reports from States, p. 1907, and Monthly summaries by States, p. 1911.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended July 15, 1922.		City.	Median for pre- vious years.	Week ended July 15, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				North Carolina:			
Los Angeles.....	1	4	.....	Durham.....	0	1	.....
Oakland.....	1	2	.....	North Dakota:			
Sacramento.....	0	2	.....	Grand Forks.....	0	1	.....
Stockton.....	0	3	.....	Ohio:			
Colorado:				Cincinnati.....	0	2	.....
Denver.....	10	1	1	Cleveland.....	1	2	.....
Connecticut:				Fremont.....	0	1	.....
Bridgeport.....	0	7	.....	Oklahoma:			
Iowa:				Oklahoma.....	3	1	.....
Cedar Rapids.....	0	1	.....	Oregon:			
Mason City.....	0	1	.....	Portland.....	4	7	.....
Muscatine.....	0	1	.....	Utah:			
Kansas:				Salt Lake City.....	7	1	.....
Coffeyville.....	0	1	.....	Washington:			
Hutchinson.....	0	4	.....	Bellingham.....	0	3	.....
Michigan:				Spokane.....	6	1	.....
Detroit.....	5	4	.....	Tacoma.....	3	1	.....
Minnesota:				Wisconsin:			
Duluth.....	2	1	.....	Milwaukee.....	2	8	.....
Minneapolis.....	6	1	Racine.....	0	1
Nebraska:				Superior.....	1	6
Omaha.....	4	1				
New Jersey:							
Newark.....	0	1				

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Missouri:		
Los Angeles.....	1	.....	St. Louis.....	9	5
Illinois:			New Jersey:		
Chicago.....	2	1	Jersey City.....	.....	2
East St. Louis.....	.....	1	New York:		
Indiana:			Ithaca.....	1	1
Indianapolis.....	.....	1	New York.....	4	.....
La Fayette.....	.....	1	White Plains.....	1	.....
Kentucky:			Ohio:		
Louisville.....	.....	1	Cleveland.....	1	.....
Maine:			New Philadelphia.....	.....	.....
Bangor.....	3	.....	Pennsylvania:		
Lewiston.....	1	1	Philadelphia.....	1	.....
Michigan:			Virginia:		
Detroit.....	1	2	Petersburg.....	1	1
Minnesota:					
Minneapolis.....	1	1			

TUBERCULOSIS.

See p. 1917; also Telegraphic weekly reports from States, p. 1907.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended July 15, 1922.		City.	Median for pre- vious years.	Week ended July 15, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Kansas:			
Anniston.....	0	3	.....	Fort Scott.....	0	1	.....
Birmingham.....	13	4	.....	Hutchinson.....	2	4	.....
Arkansas:				Kansas City.....	0	1	.....
Little Rock.....	2	2	.....	Topeka.....	2	1	.....
California:				Kentucky:			
Berkeley.....	0	1	.....	Covington.....	0	1	1
Long Beach.....	0	1	.....	Lexington.....	1	1	.....
Los Angeles.....	4	4	1	Louisville.....	5	3	1
Oakland.....	2	3	.....	Owensboro.....	6	.....	.....
Sacramento.....	1	6	.....	Paducah.....	0	1	.....
San Francisco.....	5	1	.....	Louisiana:			
Stockton.....	0	3	.....	New Orleans.....	5	3	1
Colorado:				Maine:			
Denver.....	1	6	.....	Bangor.....	0	2	.....
Connecticut:				Maryland:			
Milford.....	0	1	.....	Baltimore.....	11	2	1
New Haven.....	1	2	1	Massachusetts:			
Delaware:				Boston.....	4	1	.....
Wilmington.....	0	1	.....	Fall River.....	3	1	1
District of Columbia:				Greenfield.....	0	1	.....
Washington.....	5	5	1	Haverhill.....	0	1	.....
Georgia:				Lawrence.....	0	2	.....
Atlanta.....	2	2	.....	Newton.....	0	1	.....
Augusta.....	0	3	2	Taunton.....	0	2	.....
Macon.....	0	12	.....	Waltham.....	0	1	.....
Savannah.....	1	2	.....	Winthrop.....	0	1	.....
Valdosta.....	0	1	.....	Michigan:			
Illinois:				Battle Creek.....	0	3	.....
Chicago.....	6	4	1	Detroit.....	9	5	2
Decatur.....	0	1	.....	Kalamazoo.....	0	1	.....
East St. Louis.....	0	1	.....	Minnesota:			
Peoria.....	0	1	.....	St. Paul.....	2	2	.....
Rock Island.....	0	2	.....	Missouri:			
Indiana:				Independence.....	0	.....	1
Fort Wayne.....	1	Kansas City.....	3	4	2	
Indianapolis.....	2	1	1	St. Louis.....	6	5	1
Iowa:				Springfield.....	0	1
Davenport.....	0	1				

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

TYPHOID FEVER—Continued.

City.	Median for pre- vious years.	Week ended July 15, 1922.		City.	Median for pre- vious years.	Week ended July 15, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Montana:				Pennsylvania:			
Billings.....	0	1	—	Canonsburg.....	2	4	—
Great Falls.....	0	1	—	Chambersburg.....	0	1	—
Nebraska:				Chester.....	0	2	—
Omaha.....	0	—	1	Donora.....	0	1	—
New Hampshire:				Harrisburg.....	1	2	—
Berlin.....	0	1	—	Lancaster.....	0	1	—
New Jersey:				McKeesport.....	0	1	—
Atlantic City.....	0	1	—	Philadelphia.....	13	7	1
East Orange.....	0	1	—	Pittsburgh.....	3	5	—
Englewood.....	0	1	—	Scranton.....	0	1	—
Newark.....	2	1	1	Swissvale.....	0	1	—
Plainfield.....	0	2	—	South Carolina:			
Trenton.....	1	1	—	Charleston.....	5	7	—
New Mexico:				Greenville.....	0	2	—
Albuquerque.....	0	3	—	Tennessee:			
New York:				Knoxville.....	1	2	—
Albany.....	2	3	—	Memphis.....	5	14	—
Buffalo.....	2	3	—	Nashville.....	9	10	2
New York.....	28	18	1	Texas:			
Rochester.....	0	2	1	Dallas.....	7	6	—
Schenectady.....	1	2	—	El Paso.....	0	1	—
Troy.....	0	5	—	Houston.....	3	—	1
North Carolina:				Virginia:			
Durham.....	4	1	—	Norfolk.....	3	3	1
Wilmington.....	0	3	—	Petersburg.....	2	1	—
Winston-Salem.....	4	6	—	Roanoke.....	1	2	1
Ohio:				Washington:			
Akron.....	1	1	—	Seattle.....	0	2	—
Bucyrus.....	0	8	—	Spokane.....	0	1	—
Cleveland.....	4	3	—	Tacoma.....	0	4	—
Columbus.....	1	2	—	Walla Walla.....	0	1	—
Youngstown.....	0	—	1	West Virginia:			
Oklahoma:				Charleston.....	2	1	1
Oklahoma.....	1	7	1	Farmont.....	2	1	—
Tulsa.....	12	2	—	Wisconsin:			
Oregon:				Ashland.....	0	1	—
Portland.....	0	1	—	Milwaukee.....	2	4	—

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Popula- tion Jan. 1, 1920, subject to correction.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston.....	17,734	6	—	—	—	—	—	—	1	—
Birmingham.....	178,270	56	1	2	—	—	1	—	9	1
Mobile.....	60,151	10	—	—	—	—	—	—	—	1
Montgomery.....	43,464	21	3	—	—	—	—	—	—	1
Tuscaloosa.....	11,996	1	—	—	—	—	—	—	—	—
Arkansas:										
Fort Smith.....	28,811	5	—	—	—	—	2	—	—	—
Hot Springs.....	11,695	6	—	—	—	—	—	—	—	—
Little Rock.....	64,997	—	1	—	—	—	1	—	1	—
North Little Rock.....	14,048	—	1	—	—	—	—	—	1	—
California:										
Alameda.....	28,806	9	1	—	—	—	2	—	—	—
Berkeley.....	55,886	11	3	—	—	1	—	—	1	1
Eureka.....	12,923	8	2	—	—	—	—	—	—	—
Long Beach.....	55,593	17	1	2	—	—	1	—	—	—
Los Angeles.....	576,673	177	47	1	—	1	7	—	50	32
Oakland.....	216,361	43	3	—	—	—	2	—	2	7
Pasadena.....	45,354	9	1	—	—	—	—	—	1	—
Richmond.....	16,843	6	1	—	—	—	—	—	—	—
Riverside.....	19,341	7	—	—	—	—	—	—	—	1
Sacramento.....	65,857	25	4	1	—	—	8	1	2	2
San Bernardino.....	18,721	4	—	—	—	—	—	—	1	—
San Diego.....	74,683	17	3	—	—	1	6	—	1	3
San Francisco.....	508,410	138	23	1	9	1	4	—	27	14

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920, subject to correction.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
California—Continued.										
Santa Ana.	15,485	5					1			1
Santa Barbara.	19,441	3								
Santa Cruz.	10,917	4								
Stockton.	40,296	11					1	1	1	2
Colorado:										
Denver.	256,369	51	8		1		5			8
Pueblo.	42,908	5								
Trinidad.	10,906		4	1						
Connecticut:										
Bridgeport.	143,538	23	6		22	1	7		5	2
Bristol.	20,620	3			3					
Derby.	11,238	3			1					
Hartford.	138,036	21	1		6		1		5	
Manchester.	18,370	4					2			
Milford.	10,193	8			5					
New Haven.	162,519	33	3		41	2				3
New London.	25,688	6	1				1	1		
Norwalk.	27,700	5								
Stonington.	10,236	2								
Delaware:										
Wilmington.	110,168	23			1		2			1
District of Columbia:										
Washington.	437,571	103	6		13		1		20	6
Florida:										
Tampa.	51,252	18								1
Georgia:										
Albany.	11,555								2	
Atlanta.	200,616	68	2	1			1		2	5
Augusta.	52,548	28					1	1	1	3
Brunswick.	14,413	6								1
Macon.	52,995						1			
Rome.	18,232		1							
Savannah.	83,252	24								
Valdosta.	10,783	2	1							
Idaho:										
Boise.	21,393	7								
Illinois:										
Alton.	24,682	4	1						1	
Aurora.	36,397	18	1		1				4	2
Bloomington.	28,725	10					1		1	1
Blue Island.	11,424	3			1					
Centralia.	12,491	3								
Chicago.	2,701,705	496	89	7	246	5	20	1	273	46
Decatur.	43,818	5			1		1			
East St. Louis.	66,740	19	1							
Elgin.	27,454	5			1					
Evanson.	31,215	6			4		1			
Freeport.	19,669	5					1			
Kewanee.	16,026	8	1				1		2	1
La Salle.	13,050	1						1		
Mattoon.	13,552	7								
Oak Park.	39,530	16			6		1		2	
Peoria.	76,121	19					2			
Quincy.	35,978								4	1
Rockford.	65,651	13			19		2			2
Rock Island.	35,177	2			1					
Springfield.	59,183	15							1	1
Indiana:										
Bloomington.	11,505	2								
Crawfordsville.	10,139	2								
East Chicago.	35,967	3					1			
Elkhart.	24,277	11			1					
Fort Wayne.	36,549	14								
Frankfort.	11,585	3								
Gary.	55,378	13								
Hammond.	36,004	6	2		1		1			
Huntington.	14,000	4								
Indianapolis.	314,194	83	7		29	1	4		1	5
Kokomo.	30,067	9								
La Fayette.	22,486	3								
Logansport.	21,626	3								
Mishawaka.	15,195	2			2					2
Muncie.	36,624	10								
South Bend.	70,983	6			10		2			
Terre Haute.	66,085	14	1							

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August 4, 1922.

CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920, subject to correction.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Iowa:										
Burlington	24,057		1						4	3
Cedar Rapids	45,566						1			
Clinton	24,151		3							
Council Bluffs	36,162	8	1		1		2			
Davenport	56,727									
Des Moines	126,468		3				10			
Iowa City	11,267		1							
Marshalltown	15,731						1			
Mason City	20,065	5								
Muscatine	15,368	4								
Sioux City	71,227		2				2			
Waterloo	36,230	1					1			
Kansas:										
Atchison	12,530						1			
Coffeyville	13,452	4							1	
Fort Scott	10,693	1								
Hutchinson	23,298		2							
Kansas City	101,177				2		2		9	
Lawrence	12,456	3								
Leavenworth	16,912						1			
Parsons	16,028	4							1	
Salina	15,085	0								
Topeka	50,022	12	1						3	2
Wichita	72,128	20	7		1		1			1
Kentucky:										
Covington	57,121	18	1							
Lexington	41,534	12			5					1
Louisville	234,891	79					1		18	4
Owensboro	17,424		3		1					
Paducah	24,735								1	
Louisiana:										
Baton Rouge	21,782	5	1							
New Orleans	387,219	128	5				2		52	14
Maine:										
Auburn	16,985		3							1
Bangor	25,978						1			
Bath	14,731	4								
Biddeford	18,008		4							
Lewiston	31,791	11								
Portland	69,272	13			1		6			1
Sanford	10,691	2								
Maryland:										
Baltimore	733,826	192	12		50		3		40	27
Cumberland	29,837	10			2		1			3
Massachusetts:										
Adams	12,967		1							
Amesbury	10,036		0							
Arlington	18,665	3	1							1
Attleboro	19,731	2								1
Belmont	10,749	2								1
Boston	748,060	179	30	3	105		16		36	13
Brantree	10,580	2	1						1	
Brookline	37,748	5			6					1
Cambridge	109,694	22		1	12				4	3
Chester	43,184	7	4		5		1		2	2
Chicopee	36,214	2	1							
Clinton	12,979	1								
Danvers	11,108		1							
Everett	40,120	5								
Fall River	120,485	23	3	1	8		1		2	
Fitchburg	41,013	5	1						1	2
Framingham	17,033	3			6					
Gardiner	16,971	5			1					
Greenfield	15,462	4								
Haverhill	53,884	12			1					
Holyoke	60,203	10			3				1	
Lawrence	94,270	18	3		2		2		7	
Leominster	19,744	4							1	
Lowell	112,479	26	2		3		1		3	2
Lynn	99,148	19							1	
Malden	49,103	8			3		1		4	
Medford	39,033	5	1						1	
Melrose	18,204	5			8					
Methuen	15,189	4							2	
New Bedford	121,217	27	1		1		2		3	4

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920, subject to correction.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Newburyport	15,618	3			1				1	
Newton	46,054	4			5					
North Adams	22,282	1			1					
Northampton	21,951	5			9					
Pittsfield	41,751	9					1			
Plymouth	13,045	1								
Quincy	47,876	7			5					
Salem	42,529	10	3		18		3		2	
Somerville	93,061	12			7		1		1	
Southbridge	14,245	4			1					
Springfield	129,563	24	2		11		1		1	
Taunton	37,137	9							1	
Wakefield	13,025	0							1	
Waltham	30,915	4	1		3				2	
Webster	13,258	4			3				1	
West Springfield	13,443	2								1
Westfield	18,604	6			3					
Winthrop	15,455	2			3					
Woburn	16,574	4								
Worcester	179,754	39	1				1		8	3
Michigan:										
Alpena	11,101		3		5		1		1	
Battle Creek	36,164		2	4						
Benton Harbor	12,233		2	4					1	
Detroit	965,739	196	24	1	22	1	32	1	41	14
Grand Rapids	137,634		33	3			3		7	2
Hamtramck	48,615		1						2	
Highland Park	46,499		8	1			2		3	1
Ironwood	15,739		1		1		1		7	
Kalamazoo	48,858		15	4						1
Marquette	12,718		3	1					2	
Pontiac	34,273		4	1	14					
Port Huron	25,944		8		27					
Saginaw	61,903		18	1	1		3		3	1
Sault Ste. Marie	12,096		3						2	
Minnesota:										
Duluth	98,917		8	4		6				
Faribault	11,089		1							
Hibbing	15,069		3	2			10			
Mankato	12,469						2			
Minneapolis	380,582	69	5		4		9		36	5
Rochester	13,722		8							
St. Cloud	15,873		1				6			
St. Paul	234,595	46	11	1	22	1	8		12	5
Winona	19,143		7		1		1			1
Missouri:										
Cape Girardeau	10,252		2		5					
Independence	11,686		2							
Kansas City	324,410		32		4		2		7	7
St. Joseph	77,939		30	1	1		2			2
St. Louis	772,897	147	14		2		7		35	10
Springfield	39,631		18							1
Montana:										
Billings	15,100		8				2			
Butte	41,611		11							1
Great Falls	24,121		4	2						
Missoula	12,668		4						1	
Nebraska:										
Lincoln	54,934		12			4				1
Omaha	191,601	42	4	1	2		1			3
Nevada:										
Reno	12,016		4							
New Hampshire:										
Berlin	16,104		2							
Concord	22,167		4		5					
Dover	13,029		5							
Keene	11,210		1		2					
New Jersey:										
Ashbury Park	12,400	0			1					
Atlantic City	50,682	16			2				2	1
Bayonne	76,754		5		3				3	
Bloomfield	22,019	2			2					
Clifton	26,470	4			1		1		1	
East Orange	50,710				9		1		1	
Englewood	11,627	0			1				2	

CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920, subject to correction.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber-culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New Jersey—Continued.										
Garfield	19,381	1	1		1				2	
Hackensack	17,667	1			1					
Harrison	15,721		1		1				1	
Hoboken	68,166	18	3	1					1	2
Jersey City	297,864	73	10	1	3	1	1	1	6	4
Kearny	26,724		2							
Montclair	28,810				2		1		2	
Montgomery	12,548	5			5					
Newark	414,216	72	8	1	58	1	12		21	3
Orange	33,268	5			4				1	1
Passaic	63,824	8			8		2	1	2	1
Paterson	135,866		4		17		2		8	
Perth Amboy	41,707	10			2				1	
Phillipsburg	16,923	1								
Plainfield	27,700	6	1		13				1	1
Rahway	11,042	2					1		1	
Summit	10,174	0			5					
Trenton	119,289	31	9		8	2	2		8	3
Union	20,651						1			
West Hoboken	40,068	1	1							
West New York	29,926	4	2							1
West Orange	15,573	2			3					1
New Mexico:										
Albuquerque	15,157	3	9							1
New York:										
Albany	113,344		3						5	
Auburn	36,192	9		1						
Buffalo	506,775	124	7		3		12			13
Cohoes	22,987	3								
Cortland	13,294	3	1		10		1		1	
Geneva	14,648	2								
Hornell	15,025	1			7				1	
Hudson	11,745	4							3	
Ithaca	17,004	3					1			
Jamestown	38,917	8			2					
Lackawanna	17,918	8			1		1		3	
Lockport	21,308	4							2	
Middletown	18,420				1		1		1	
Mount Vernon	42,726	10			4		1			
Newburgh	30,366	9			28					1
New York	5,621,151	1,094	140	11	237	4	63	1	274	189
Niagara Falls	50,760	14	5		17		3		2	
North Tonawanda	15,482				2		2		1	
Ogdensburg	14,609	9								
Olean	20,506	5								
Peekskill	15,868	4			26					
Poughkeepsie	35,000	6			1		1			1
Rochester	295,750	66	8	2	42			1	21	
Saratoga Springs	13,181	5								
Schenectady	88,723	19					6		4	1
Troy	72,013	31					1		4	2
Watertown	31,285	20			1		2			
White Plains	21,031	3							3	
North Carolina:										
Durham	21,719	3	3							1
Greensboro	19,861	4								
Raleigh	24,418	11	1							
Rocky Mount	12,742	4								
Salisbury	13,884	3								
Wilmington	33,372	5							1	
Winston-Salem	48,395	14	1						1	2
North Dakota:										
Fargo	21,961	0	2							
Grand Forks	14,010						1			
Ohio:										
Akron	208,435	25	1		10		3		1	
Ashtabula	22,082	1								
Barberton	18,811	3							1	
Bucyrus	10,425	2							1	
Cambridge	13,104	6			2					2
Canton	87,091	18	2		1				1	1
Cincinnati	401,247	93	1		9		1		8	11
Cleveland	796,536	142	22	2	96	2	17		56	15

¹ Pulmonary tuberculosis only.

August 4, 1922.

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CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

CITY REPORTS FOR WEEK ENDED JULY 15, 1922—Continued.
DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

FOREIGN AND INSULAR.

SMALLPOX ON VESSELS.

Steamship "Changsha"—At Hongkong, China.

A case of smallpox was landed, May 11, 1922, at Hongkong, China, from the steamship *Changsha*. The case occurred in an intending Chinese passenger. After arrival at Thursday Island quarantine, Australia, the *Changsha* proceeded under limited pratique to ports on the Australian coast.

Steamship "Comeric"—At Sydney for Durban.

On May 11, 1922, a further case of smallpox was reported on the steamship *Comeric*, at sea, from Sydney, Australia, for Durban, Union of South Africa. The case previously reported occurred at sea, en route from Shanghai, China, for Newcastle, Australia, April 8, 1922.¹ Both cases occurred in members of the Malay crew. The *Comeric* was released from quarantine at Newcastle April 19, proceeding to Sydney direct and leaving Sydney in quarantine May 3, 1922.

Steamship "St. Albans"—At Thursday Island—From Hongkong.

A case of smallpox was found on arrival on the steamship *St. Albans*, at Thursday Island quarantine, Australia, May 18, 1922. The *St. Albans* left Shimonoseki, Japan, April 8, 1922, for Melbourne, Australia, via Hongkong and Manila. The case occurred in a Chinese steerage passenger. The *St. Albans* left Thursday Island in quarantine for Townsville, Australia.

HAWAII.

Plague—Plague-Infected Rat.

The occurrence of two fatal cases of plague has been reported in Hawaii. The first case developed, June 30, 1922, at Kalopa Homesteads, Hamakua, and terminated fatally July 4, 1922. The patient was a Hawaiian. The second case occurred at Pokahea, Paauilo, in a Japanese, and terminated fatally July 7, 1922.

A rat trapped at Paauhau Gulch, June 29, was reported found positive for plague at the Hilo Laboratory, June 30, 1922.

HUNGARY.

Outbreak of Hydrophobia.

Information received under date of July 7, 1922, shows an outbreak of hydrophobia affecting not only dogs but other animals, reported in Hungary during the month of June, 1922. Cases were

¹ Public Health Reports, June 23, 1922, p. 1555.

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reported in about 423 villages. Later reports showed the infection to be spreading, and it was stated that it was difficult to obtain experimental animals for the preparation of serum.

MEXICO.

Smallpox—Nogales.

Information dated July 26, 1922, reports the occurrence of 22 cases of smallpox in Nogales, Sonora, Mexico. It was stated that the authorities were exercising compulsory vaccination.

Yellow Fever—Tampico.

The occurrence of a fatal case of yellow fever at Tampico, Mexico, was reported under date of July 30, 1922. The case was stated to have been brought to Tampico, July 27, 1922, on the eighth day of illness, from a locality in the vicinity. The case terminated fatally July 29, 1922.

PANAMA.

Communicable Diseases—Canal Zone—June, 1922.

Communicable diseases were reported to the chief quarantine officer, Panama Canal, during the month of June, 1922, as follows:

June, 1922.

Disease.	Cases.				Total.
	Panama.	Colon.	Canal Zone.	Non-resident.	
Chicken pox.....	12	2	6	.....	20
Diphtheria.....	10	2	6	.....	18
Dysentery.....	1	.....	.....	.....	1
Hookworm disease.....	48	.....	28	.....	76
Malaria.....	14	7	190	39	250
Measles.....	10	1	.....	.....	11
Meningitis.....	2	1	.....	.....	3
Mumps.....	1	.....	1	.....	2
Tuberculosis.....	11	3	4	3	21
Typhoid fever.....	.....	1	.....	.....	1

POLAND.

Communicable Diseases—April 23—May 6, 1922.¹

Communicable diseases have been reported in Poland, exclusive of the districts of Brest-Litovsk and Minsk, but including the district of Wilno, as follows:

April 23—May 6, 1922.

Disease.	New cases.	Deaths.	Locality of highest proportional mortality.
Cerebrospinal meningitis.....	17	11	District of Lodz.
Diphtheria.....	157	15	District of Nowogrodek.
Measles.....	806	32	District of Wolyn.
Scarlet fever.....	486	69	District of Stanislawow.
Smallpox.....	228	44	Do.
Tuberculosis.....	232	415	District of Warsaw.
Typhoid fever.....	672	37	District of Krakow.
Typhus fever.....	2,811	172	District of Lublin.
Typhus, recurrent.....	1,598	34	Do.

¹ Public Health Reports, June 16, 1922, p. 1488; and July 28, 1922, p. 1859.

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RUMANIA.

Cholera—Crangasi.

An outbreak of cholera has been reported at Crangasi, a suburb of the city of Bucharest, Rumania. There were reported 10 cases with 6 deaths and 56 contacts under observation to July 15, 1922. The first case was stated to have occurred in a soldier on leave from the frontier along the Dniester.

UNION OF SOUTH AFRICA.

Smallpox—Typhus Fever—April 1-30, 1922.

During the month of April, 1922, smallpox and typhus fever were reported in the Union of South Africa as follows:

Smallpox.—Cases, 43; deaths, 6; occurring in the colored population. Of this number, 18 cases with 6 deaths were reported in Natal, 13 cases in the Cape Province, and 12 cases in the Transvaal. In the white population 23 cases, of which 20 cases occurred in Natal and 3 cases in the Cape Province, were reported.

Typhus fever.—Cases, 355; deaths, 77; occurring among the colored population. Of this number, 338 cases with 75 deaths were reported in Cape Province, 12 cases with 1 death in the Orange Free State, 3 cases with 1 death in Natal, and 2 cases in the Transvaal. Among the white population 3 cases were reported, of which 2 occurred in the Cape Province and 1 in the Orange Free State.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During Week Ended August 4, 1922.¹

CHOLERA.

The reports contained in the following tables must not be considered as complete or final, either as regards the list of countries included or the figures for the particular countries for which reports are given.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	June 4-10.....		1	
India:				
Calcutta.....	June 11-17.....	15	12	
Madras.....	do.....	1	1	
Rangoon.....	May 21-June 3.....	70	33	
Philippine Islands:				
Manila.....	June 4-17.....	6		
Provinces—				
Batangas.....	May 28-June 3.....	1	1	
Bulacan.....	Apr. 30-May 6.....	1	1	
Mindoro.....	Apr. 23-29.....	1		
Pampanga.....	May 14-27.....	2	2	
Rizal.....	May 21-27.....	1		
Tarlac.....	do.....	1	1	
Rumania:				
Crangasi.....				Locality, suburb of city of Bucharest. Outbreak. To July 15, 10 cases, 6 deaths, 56 contacts. First case stated in soldier from frontier on Dniester River.
Syria:				
Aleppo.....	June 25-July 1.....			Reported present in interior.

¹ From medical officers of the Public Health Service, American consuls, and other sources.

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August 4, 1922.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended August 4, 1922—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon: Colombo.....	June 4-10.....	2	2	
China: Hongkong.....	June 4-17.....	114	72	
Hawaii: Hamakua.....	June 30-July 4.....	1	1	At Kalopa Homesteads. Case Hawaiian.
Paauhau.....	June 30.....			One plague rat, trapped at Paauhau Gulch, June 29; found positive, June 30, 1922.
Paauilo.....	July 7.....		1	At Pokahea. In Japanese.
India: Calcutta.....	June 11-17.....	2	2	May 21-27, 1922: Cases, 482; deaths, 408.
Karachi.....	do.....	2	4	
Madras Presidency.....	do.....	43	23	
Rangoon.....	May 21-June 10.....	62	56	

SMALLPOX.

Arabia: Aden.....	June 18-24.....	28	6	
China: Hongkong.....	June 4-17.....	10	9	
Dominican Republic: San Pedro de Macoris.....	June 25-July 1.....	37		In city and country.
Santo Domingo.....	July 2-8.....			Present in city and country. A few cases.
India: Calcutta.....	June 11-17.....	13	5	
Karachi.....	do.....	4	1	
Madras.....	do.....	35	26	
Rangoon.....	May 21-June 10.....	9	5	
Java: West Java— Batavia.....	May 27-June 2.....	1	1	Province.
Luxembourg.....	June 15-30.....	1		May 1-31, 1922: Cases, 2.
Malta.....	June 1-15.....	2		
Mexico: Nogales.....	July 26.....	22		State of Sonora.
Poland.....				Apr. 23-May 6, 1922: Cases, 228; deaths, 44.
Portugal: Lisbon.....	May 29-June 18.....	6		
Do.....	June 25-July 1.....		6	
Spain: Seville.....	June 19-July 2.....		35	
Union of South Africa: Cape Province.....				Apr. 1-30, 1922: Cases, 43; deaths, 6 (colored); white, 23.
Do.....	May 28-June 3.....			Apr. 1-30, 1922: Cases, 13 (colored); white, 3.
Natal.....				Outbreaks.
Transvaal.....				Apr. 1-30, 1922: Cases, 18; deaths, 6 (colored); white, 20.
Do.....	May 28-June 3.....			Apr. 1-30, 1922: Cases, 12 (colored). Outbreaks.
Yugoslavia: Serbia.....	Oct. 23-29.....	5		Year 1921.
On vessels: S. S. Changsha.....	May 11.....	1		At Hongkong, China. Case landed from vessel; patient, intending passenger. Vessel proceeded to Australian ports.
S. S. Comerie.....	May 11.....	1		At sea, en route to Durban, S. A., from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555).
S. S. St. Albans.....	May 18.....	1		At Thursday Island quarantine Australia. Case in person of Chinese steerage passenger. Vessel left Shimoneseki, Japan, for Melbourne via Hongkong and Manila. Left Thursday Island for Australian ports.

August 4, 1922.

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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.
Reports Received During Week Ended August 4, 1922—Continued.
TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria: Oran.....	June 21-30.....	1.....		
Asia Minor: Smyrna.....	June 18-24.....	2.....		
Austria: Vienna.....	June 4-10.....	1.....		
Poland.....				Apr. 23-May 6, 1922: Cases, 2,811; deaths, 172. Recurrent typhus: Cases, 1,598; deaths, 34.
Union of South Africa.....				Apr. 1-30, 1922: Cases, 355; deaths, 77 (colored); white, 3 cases.
Cape Province.....				April 1-30, 1922: Cases, 338; deaths, 75 (colored); white, 2 cases.
Natal.....				Apr. 1-30, 1922: Cases, 3; deaths, 1 (colored). Outbreaks.
Do.....	May 28-June 3.....			Apr. 1-30, 1922: Cases, 12; deaths, 1 (colored); white, 1 case. Outbreaks.
Orange Free State.....				Apr. 1-30, 1922: Cases, 2 (colored). Outbreaks.
Do.....	May 28-June 3.....			Apr. 1-30, 1922: Cases, 2 (colored). Outbreaks.
Transvaal.....				
Do.....	May 28-June 3.....			

YELLOW FEVER.

Mexico: Tampico.....	July 27-29.....	1.....	1.....	From locality in vicinity. Patient brought to Tampico on eighth day of illness.
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Reports Received from July 1 to 28, 1922.¹
CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China: Amoy.....	May 14-June 3.....	1.....	2.....	
Greece: Athens.....	June 29.....	1.....	1.....	
	June 7-17.....	30.....	11.....	
India: Bombay.....	Apr. 23-29.....	1.....	1.....	
Calcutta.....	Apr. 23-June 10.....	512.....	357.....	
Madras.....	May 21-June 3.....	2.....		
Rangoon.....	May 7-20.....	10.....	9.....	
Philippine Islands: Manila.....	May 21-27.....	1.....		
Province— Camarines Sur.....	Mar. 25-Apr. 1.....	1.....	1.....	
Laguna.....	Apr. 16-22.....	1.....		
Pampanga.....	do.....	1.....	1.....	
Rizal.....	Apr. 2-8.....	1.....	1.....	
Poland: Rowno.....	June 18.....			Among persons repatriated from Russia.
Siam: Bangkok.....	Apr. 30-May 13....	4.....	3.....	
Syria: Aleppo.....	May 27-June 3....			A few cases in interior.

¹ From medical officers of the Public Health Service, American consuls, and other sources. For reports received from Dec. 31, 1921, to June 30, 1922, see Public Health Reports for June 30, 1922. The tables of epidemic diseases are terminated semiannually and new tables begun.

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August 4, 1922.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to 28, 1922—Continued.

PLAQUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Asia Minor:				
Smyrna.....	May 28-June 17.....	3	1	
Brazil:				
Pernambuco.....	May 7-13.....	1	.....
British East Africa:				
Kenya Colony— Nairobi.....	Feb. 1-28.....	15	15	
Ceylon:				
Colombo.....	May 6-June 3.....	7	5	
China:				
Amoy.....	May 7-June 3.....	.....	32	
Canton.....	May 1-31.....	21	17	May 20: From 10 to 20 deaths reported daily.
Foochow.....	May 7-13.....	4	4	
Ecuador:				
Guayaquil.....	June 1-15.....	.....	.....	Rats found infected, 16; examined, 3,400.
Egypt:				
City—				
Alexandria.....	June 1-12.....	14	5	
Port Said.....	June 12.....	1	1	Septicemic.
Suez.....	May 24-June 5.....	3	2	
Province—				
Assiout.....	May 30-June 12.....	5	4	Septicemic, 1.
Benisouef.....	May 26-June 7.....	3	1	
Fayoum.....	June 3-6.....	4	2	
Gharbieh.....	May 26-June 12.....	21	9	
Minieh.....	June 2-12.....	4	3	
Greece:				
Patras.....	Apr. 24-May 14.....	.....	3	
India:				
Bombay.....	Apr. 23-May 13.....	110	76	Apr. 23-May 20, 1922: Cases, 4,599; deaths, 3,474.
Calcutta.....	Apr. 23-June 10.....	52	50	
Karachi.....	May 23-June 10.....	52	45	
Madras Presidency.....	May 21-June 10.....	15	6	
Rangoon.....	May 6-20.....	56	53	
Java:				Month of April, 1922: Report of the seven Provinces of Java: Cases, 413; deaths, 495.
East Java—				
Soerabaya.....	May 7-13.....	2	2	
Soerakarta— Keporen.....	May 20.....	.....	.....	Epidemic.
Madagascar:				
Tananarive Province— Ankestrina.....	May 4.....	.....	1	Native village; disease stated to have been present since about Apr. 27, 1922.
Mesopotamia:				
Bagdad.....	Apr. 1-30.....	68	40	
Mexico:				
Vera Cruz.....	June 30.....	.....	.....	One plague-infected rat.
Peru:				
Peru.....	.....	.....	.....	May 1-15, 1922: Cases, 36; deaths, 19.
Philippine Islands:				
Manila.....	June 3.....	1	1	From S. S. Taisang from Amoy, China.
Siam:				
Bangkok.....	Apr. 30-May 13.....	1	1	
Straits Settlements:				
Singapore.....	Apr. 30-June 5.....	7	8	
Union of South Africa:				
Orange Free State— Grootkom Farm.....	May 7-13.....	.....	.....	One dead plague-infected rodent found. Locality adjoins Tru- cart's Berg Farm, on which plague-infected mouse was found preceding week.
Rendezvous Ry. Sta- tion.	May 14-20.....	.....	.....	Plague-infected wild rodent found near.
On vessel:				
S. S. Taisang.....	June 1-3.....	1	1	At Manila, P. I., from Amoy, China. Patient landed at Manila June 1, 1922. The Taisang was 2½ days en route direct from Amoy.

August 4, 1922.

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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to 28, 1922—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden.....	May 7-June 17....	41	15	
Asia Minor:				
Smyrna.....	May 14-June 24....	4		In district.
Bolivia:				
La Paz.....	Mar. 1-Apr. 30....	97	16	
Brazil:				
Para.....	May 29-June 18....	6		
Rio de Janeiro.....	May 14-June 17....	43	11	
Sao Paulo.....	Apr. 10-May 7....	2	2	
British East Africa:				
Kenya Colony—				
Dares Salaam.....	Apr. 16-May 22....	13		
Zanzibar.....	May 1-31....	26	6	
Canada:				
Alberta—				
Calgary.....	June 18-24....	1		
Manitoba—				
Winnipeg.....	May 6-June 17....	3		
New Brunswick—				
Kent County.....	June 25-July 1....	2		
Madawaska County.....	June 4-17....	6		
Ontario—				
North Bay.....	June 3-17....	2		
Ottawa.....	June 11-July 1....	17		
Do.....	July 2-8....	4		
Toronto.....	June 18-July 1....	5		
Ceylon:				
Colombo.....	May 14-20....	1		
Chile:				
Concepcion.....	Mar. 14-June 5....		62	In Concepcion Province; epidemic in May, 1922, with 60 reported cases. To June 5: Present.
Quillan.....	May 16-22....	13		
San Patricio.....				
Talcahuano.....	do.....			
Temuco.....				
Valparaiso.....	Mar. 26-Apr. 22....		52	Incomplete; several districts not reporting. Present.
China:				
Amoy.....	May 7-20....			
Antung.....	May 29-June 4....	3		
Chungking.....	May 28-June 10....			
Foochow.....	May 14-20....	1		
Hongkong.....	May 14-June 3....	26	20	
Manchuria—				
Dairen.....	May 15-June 4....	2	1	
Harbin.....	May 22-28....	1		
Nanking.....	May 7-June 3....			
Shanghai.....	May 22-28....	1		
Tientsin.....	May 14-20....			
Tsingtan.....	May 9-15....	1	1	
Chosen (Korea):				
Chemulpo.....	May 1-31....	1		
Fusan.....	do.....	118	33	
Seoul.....	do.....	15	2	
Cuba:				
Antilla.....	June 18-24....	1		
Cienfuegos.....	June 24-July 1....	1		
Dominican Republic:				
San Pedro de Macoris.....	June 4-24....	76	1	
Santo Domingo.....	June 18-24....	3	9	
Do.....	June 25-July 1....	1		
Cuba:				
Santiago.....	June 1-30....	3		
Egypt:				
Port Said.....	June 11-17....	1		
Flume.....	June 13-19....	1		
France:				
Paris.....	June 1-10....	1	* 1	
Great Britain:				
Sheffield.....	May 28-June 17....	5		
Southampton.....	June 18-24....	2		
Halifax.....				
Huddersfield.....				
Greece:				
Saloniki.....	May 1-21....	3		
Syracuse Island.....	May 26....	12	5	Outbreak reported under date of June 17, 1922. Do.

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August 4, 1922.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to 28, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Haiti:				
Cape Haitien.....	June 11-17.....	1		
Plaine du Nord.....	do.....			Vicinity of Cape Haitien. Present.
India:				
Bombay.....	Apr. 23-May 6.....	14	6	
Calcutta.....	Apr. 23-June 10.....	67	53	
Karachi.....	May 23-June 10.....	31	7	
Madras.....	May 14-June 10.....	124	48	
Rangoon.....	May 7-13.....	21	4	
Japan:				
Kobe.....	June 19-25.....	2		
Yokohama.....	May 29-June 11.....	2	1	
Java:				
West Java— Batavia.....	Apr. 28-May 18.....	8		City and Province.
Malta.....	May 16-31.....	1		
Mesopotamia:				
Bagdad.....	Apr. 1-30.....	3	1	
Mexico:				
Chihuahua.....	June 22-July 2.....		1	
Guadalajara.....	May 1-31.....	7		Estimated cases, 4 to 10.
Manzanillo.....	June 6-25.....		4	Estimated.
Do.....	June 27-July 3.....	6	1	Including municipalities in Federal District.
Mexico City.....	May 21-June 10.....	101		May 1-15, 1922: Cases, 5; deaths, 4. Mar. 23-Apr. 22, 1922: Cases, 468; deaths, 113.
Peru.....				
Poland.....				
Portugal:				
Lisbon.....	June 4-10.....	17		
Spain:				
Corunna.....	June 11-17.....	1		
Seville.....	do.....	36		Week ended June 11; many new cases.
Valencia.....	May 21-27.....	2	1	
Straits Settlements:				
Singapore.....	Apr. 30-June 5.....	11	2	
Switzerland:				
Basel.....	May 28-June 3.....	1		
Berne.....	May 14-20.....	1		
Zurich.....	June 4-17.....	6		Apr. 23-29: One case.
Syria:				
Aleppo.....	June 4-24.....			Present.
Turkey:				
Constantinople.....	May 21-June 24.....	21	6	
Union of South Africa:				
Cape Province.....	May 7-27.....			Outbreaks.
Orange Free State.....	do.....			Do.
Southern Rhodesia.....	May 11-31.....	54	1	Do.
Transvaal.....	May 7-20.....			
Virgin Islands:				
St. Thomas.....	June 5-18.....	1	1	At quarantine. From vessel from Dominican Republic. Sept. 4-24, 1921: Cases, 11; deaths, 4.
Yugoslavia.....				
Serbia— Belgrade.....	June 11-17.....	1		
On vessel:				
Schr. Fancy Me.....	May 28.....			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. One case removed to quarantine June 5; died, June 18.
S. S. Shelley.....	Apr. 19.....	1		At sea en route from Hongkong. Vessel left Hongkong Apr. 17. Arrived Thursday Island Quarantine, Australia, Apr. 28, 1922. Case, member of crew; type, confluent hemorrhagic.

TYPHUS FEVER.

Algeria:				
Algiers.....	May 1-31.....	16	4	
Oran.....	June 1-20.....	2	1	
Asia Minor:				
Smyrna.....	May 14-June 10....	6		City and district.

August 4, 1922.

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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to 28, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria:				
Vienna.....	May 7-June 3.....	2	1	
Bolivia:				
La Paz.....	Mar. 1-Apr. 30.....	15	8	
Bulgaria:				
Sofia.....	May 28-June 17.....	4		
Chile:				
Concepcion.....	Apr. 11-May 29.....		10	
Valparaiso.....	Apr. 2-23.....		6	
China:				
Antung.....	May 15-21.....	1		
Foochow.....	May 14-20.....	1		
Manchuria—				
Hartbin.....	May 8-June 11.....	4		
Czechoslovakia:				
Prague.....	June 11-17.....	1		
Egypt:				
Alexandria.....	June 4-17.....	4	1	
Cairo.....	Mar. 19-Apr. 8.....	14	10	Relapsing fever, Mar. 26-Apr. 8, 1 case.
Port Said.....	May 28-June 3.....	1		
Germany:				
Berlin.....	Apr. 30-May 6.....		1	
Königsberg.....	May 28-June 3.....	1		May 1-6, 1922: Five cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Greece:				
Saloniki.....	May 1-28.....	23	1	
Mesopotamia:				
Bagdad.....	Apr. 1-30.....	1		
Mexico:				
Mexico City.....	Apr. 23-June 10.....	98		Including municipalities in Federal District.
Poland.....				Mar. 26-Apr. 29, 1922: Cases, 7,155. Recurrent typhus, cases, 5,432. Mar. 26-Apr. 29, 1922: Cases, 5,695; deaths, 349. Recurrent typhus: Cases, 4,515; deaths, 155.
Warsaw.....	Apr. 23-May 20.....	80		Among permanent and transient residents.
Portugal:				
Oporto.....	May 4-24.....	9	4	
Rumania:				Apr. 1-May 31, 1922: Cases, 62.
Cities—				
Bucharest.....	May 1-31.....	14		
Cernauti.....	do.....	5		
Chisinau.....	Apr. 1-30.....	21		
Cluj.....	May 1-31.....	18		
Constanza.....	do.....	1		
Galata.....	do.....	1		
Sulina.....	do.....	2		
Provinces—				
Bucovina.....	Jan. 1-31.....	35	13	Recurrent typhus: Cases, 7
Chisinau.....	Apr. 1-30.....	14		
Transylvania.....	Jan. 1-31.....	16	3	
Russia:				
Estonia.....	Apr. 1-30.....	15		
Lettonia.....	do.....	275		Recurrent typhus: Cases, 12.
Spain:				
Seville.....	May 21-June 3.....		1	
Madrid.....	May 1-31.....		9	
Tunis:				
Tunis.....	June 4-10.....	2		
Turkey:				
Constantinople.....	May 21-June 17.....	12		
Union of South Africa:				
Cape Province.....	May 7-13.....			Outbreaks.
Natal.....	May 7-13.....			Do.
Transvaal.....	May 7-27.....			Do.
Yugoslavia—				
Bosnia-Herzegovina.....	Aug. 7-13.....	1		Aug. 7-13, 1921: 2 new cases. (1921.)
Croatia-Slavonia.....	Sept. 4-10.....	1		Do.
Volvodina.....	Aug. 7-13.....	1		Do.
From vessel:				
S. S. Smolensk.....	June 14.....	1	1	From Danzig, May 30, 1922. At embarkation detention camp, Southampton, England. Public Health Reports, June 30, 1922, p. 1610.

* Consecutive with reports published in Public Health Reports June 30, 1922, p. 1621.